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ABSTRACT

Noting that the advance of new technologies and the rise of service economies have dramatically changed the socioeconomic development of the world and forced nations to adopt national information policies, this handbook explores the concept of such policies. It is based on the experiences reported in numerous country case studies, meeting proceedings and publications, and on Unesco field experience in some 30 states currently working on the elaboration of their national information policy. The following basic issues are addressed: (1) what a national policy on information is and what its role is; (2) what the benefits and main features of such a policy are; (3) how such a policy can be formulated and implemented; and (4) what the prerequisites for its formulation are. The first three chapters are devoted to the general description of concepts, objectives, and methodological aspects covered in the handbook. Each of the following 10 chapters deals with a particular stage leading to the establishment of a national policy on information. These stages are grouped in three phases which encompass the aspects of policy formulation, approval, implementation, and operation. Concluding the handbook are seven annexes which illustrate the major steps of the methodology. (106 references) (MAB)

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National Information Policies

A Handbook on the Formulation, Approval, Implementation and Operation of a National Policy on Information

Victor Montviloff

IR 053 599

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NATIONAL INFORMATION POLICIES

A Handbook on the Formulation, Approval, Implementation and Operation of a National Policy on Information

by

Victor Montviloff

General Information Programme & UNISIST

United Nations Educational, Scientific and Cultural Organization

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PREFACE

The advance of new technologies and the rise of service economies as opposed to manufacturing economies are two important events that have marked the socio-economic development of the world during the second half of this century. These remarkable changes have generated a significant evolution in the attitudes of governments towards information activities, pressing them to revise their national priorities and to establish new policies. The government policy makers are facing at present the formidable challenge of adapting the new ways and means of providing and exploiting information resources in their national development strategies. They increasingly recognize that in order to make information resources and services more responsive to the economic, social and political needs the former must be carefully planned and managed; hence their increasing interest for the formulation of national information policies which would guide the development of information activities within their respective countries.

The present handbook is based on the experience reported in numerous country case studies, meeting proceedings and publications, and on Unesco field experience in some thirty states currently working on the elaboration of their national information policy. It is also prepared with a view of taking into account the possible future trends in the development of information resources and services.

ACKNOWLEDGEMENTS

This handbook was prepared from the efforts made by many people who either studied conceptual aspects of formulation and operation of national information policies or carried out their applications in the different national environments around the world. They all in one way or another made an invaluable contribution to this work.

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Mr. P. Canisius	President, German Commission for Unesco, Federal Republic of Germany
Prof. M. Dosa	Professor, School of Information Studies, Syracuse University, Syracuse, N.Y., USA
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Mr. P. Vásárhelyi	Director, International Operations Computer and Automation Institute, Academy of Sciences, Budapest, Hungary
Mr. A. Wysocki	Chairman, IFLA Programme Management Committee, The Hague, Netherlands

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Thanks are due as well to Ms. Yi Peng of Syracuse University who worked several months on putting the first drafts together and to Miss M. Bouwens, Mrs. H. Cazalis-Deneux, and J. de Jonge for their mastery of the word processing techniques which made possible the rapid typing of the manuscript.

INTRODUCTION

The handbook describes the concept of national policy on information as it is understood today in the information community i.e. a set of national information policies; the handbook provides a list of the main characteristics of such a policy, proposes a methodology for its formulation, adoption, implementation and operation which could be adapted to the varying national circumstances.

The handbook is addressed to the information specialists, more particularly to professionals involved in the development and management of information resources and services and to those government officials whose responsibilities include the supervision of such activities. The main objective of the handbook, contrary to numerous similar works and publications on the subject, is to provide a practical and easily applicable methodology for the formulation and implementation of national information policies in sometimes vastly different socio-economic environments.

Nevertheless the proposed approach should not be considered as a universal formula in this field. It rather aims at diffusing a know-how derived from a proved experience in many parts of the world in recent years. It gives a broad course of action for the establishment of national information policies. The reader is expected to draw from this material concepts and procedures which suit best his/her national situation.

The handbook addresses the following basic questions:

- what is a national policy on information? what is its role?
- what are the benefits of such a policy?
- what are its main features?
- how can it be formulated and implemented?
- what are the prerequisites for its formulation?

The handbook is structured accordingly.

The first three chapters are devoted to the general description of concepts, objectives and methodological aspects used in the handbook. Each of the following ten chapters deals with a particular stage leading to the establishment of a national policy on information. These stages are grouped in three phases:

Phase I	(Chapters IV, V and VI) covering the policy formulation aspects
Phase II	(Chapters VII, VIII and IX) covering the policy approval aspects
Phase III	(Chapters X, XI, XII and XIII) covering the policy implementation and operation aspects

Examples illustrating the major steps of the methodology are given in Annexes A, B, C, D, E, F, G.

CHAPTER I

DESCRIPTION OF THE BASIC CONCEPTS

- Data, Information, Knowledge
- Information Resources, Services and Systems
- Policy
- Information Policy

CHAPTER I

DESCRIPTION OF THE BASIC CONCEPTS

The concept of information policy is still at an early stage of development, where theories are not yet fully accepted and opinions are still often controversial. The descriptions provided below aim only at indicating to the reader the meanings given in this handbook to such terms as information, information resources and services, information infrastructures, and information policy. Although those became generally accepted in the international information community experiences may differ from country to country.

DATA, INFORMATION, KNOWLEDGE

The relationship of data, information and knowledge has been described in length in the professional literature. **Information** is some meaningful message transmitted from source to users. In this process information may be stored in information products and systems organized for the purpose of providing a memory in numerical, textual, sound and image forms. Information may also be communicated through interpersonal channels. The "source" may be documentary material, institutions or people.

Data are facts, the raw material from which information is created for or by the user. Information once assimilated by an individual becomes personal **knowledge**. Personal knowledge once incorporated in books, files, software, personal messages, etc. serves as potential information for others.

There exist different types of information. Hence, information is also often defined by:

- its **role**

  e.g. problem solving information (information for development, information for decision makers) or mission-oriented information (information needed for the implementation of a given project);

- its **coverage**
  - e.g. general information (news media) or specialized subject-oriented information (scientific and technical information)

- its **level**
  - e.g. highly scientific, technical, or less technical and more descriptive or popularized information

- its **channel**
  - e.g. information systems and services (computerized systems) or mass media or meetings or interpersonal communications

- its **accessibility**
  - e.g. public information or proprietary information or classified information.

In this book "information" is understood as problem-solving, and publicly-available information, which serves for development. It excludes on one hand information of general nature largely diffused through news and advertisement media and, on the other hand, classified information which is restricted to a limited number of users.

INFORMATION RESOURCES, SERVICES AND SYSTEMS (1)

Information **resources** include: data in textual, numerical, image or sound forms recorded on conventional and non-conventional media; collections; human expertise; institutional expertise; information industry; etc.

Information **services** include: provision of information and data through systems and networks of different types in the private and public sectors (data banks; databases; library systems; library services; documentation centres and services; information analysis, consolidation and repackaging centres and services; archives; statistical services, etc.).

Information **systems** are composed of sets of information units in computerized or non-computerized forms which interact with each other in some consistent pattern.

Information **infrastructure** consists of information resources, services and systems, supported or not by informatics and telecommunication facilities, necessary for the processing and delivery of information. The traffic within this infrastructure is information itself.

POLICY

A **policy** is a set of principles and strategies which guide a course of action for the achievement of a given goal. Policies may be developed at the organizational or institutional level (micropolicies) or at the national, regional or international level (macropolicies). Policies are embodied in the so-called policy instruments. These can be of the following kinds: legal instruments (constitution, parliamentary act, laws, regulations, international treaties, etc.), professional instruments (codes of conduct, professional ethics, etc.) and cultural instruments (customs, beliefs, traditions, social values, etc.).

INFORMATION POLICY

Applied to the field of information policies provide guidance for the design of a strategy and programmes for the development and use of information resources, services and systems.

A policy on information or information policy is a set of such policies. An information policy can be formulated at the institutional, national, regional or international level.

CHAPTER II

OBJECTIVES OF NATIONAL POLICIES ON INFORMATION

- Need for a National Policy on Information
- Goal of a National Policy on Information
- Key issues of a National Policy on Information
- Features of a National Policy on Information

CHAPTER II

OBJECTIVES OF NATIONAL POLICIES ON INFORMATION

NEED FOR A NATIONAL POLICY ON INFORMATION

A national policy is required to ensure the harmonious implementation and operation of information resources, services and systems e.g. timely access to relevant information to varying needs of users throughout the society, coordination and compatibility of the overall national information system, better complementarity and compatibility between the various legislations concerning the provision of information, better responsiveness to the implications of new information developments and more effective participation in regional and international information systems and networks (1, 8, 27, 29, 30, 41, 51).

The fundamental premise of an overall national policy on information systems and services is that any economic, social and political system will perform more efficiently if a mechanism is provided which will ensure that decision makers, planners, managers, executives, researchers in the government and private sectors and professional practitioners have timely access to up-to-date, relevant and reliable data and information.

An overall national policy on information resources and services fully incorporated into the national development plan, is essential for national socio-economic development. Many countries of the world, both industrialized as well as economically developing ones, have been concerned with the coordination of their various information services in order to channel all the information resources into a national information system - composed of e.g. sectoral information systems, specialized libraries, data banks and other information services - which can respond to the information needs of all citizens (2, 33, 37, 45-50, 52-82).

In many countries there exist constitutional acts, policies and legislation of various kinds relating in varying degrees to the provision of information. But the inter-relationships which exist between issues concerning information communication, information technology, information economics, information management, information privacy and confidentiality, and the right to information call for the formulation of an overall comprehensive approach to the problem.

The very fact that decision making and planning today necessitates data and information of all kinds such as social, financial, scientific and technical and cultural from national as well as external sources, makes it imperative that a comprehensive basic policy statement be adopted. Such a statement should also be sufficiently sensitive to the developments in information technologies, responsive to the implications of the emerging "Information age" and the needs of networking and resource sharing at the regional and international levels.

The effective participation of a country in the development of regional/international information systems and networks, depends in a large measure, on the existence of a strong national information infrastructure. It is being increasingly realized that the development of such an infrastructure and its contribution to regional and international cooperation in the information field will be facilitated by the formulation and implementation of an appropriate policy on information resources and services in the countries participating in the network.

GOAL OF A NATIONAL POLICY ON INFORMATION

The goal of the national policy on information is to attain access to and optimal utilization of the specialized and professional knowledge, the scientific, technical, social and economic information and expertise generated and/or available within the country and elsewhere in the world as a problem-solving resource and as a resource for development in all sectors of the society (2).

Specific objectives derived from the above general policy goal include the following:

a. Provision of relevant, reliable and timely information data at a reasonable cost to all those contributing in diverse ways to the achievement of the national development goals, e.g. researchers, engineers and technicians, development planners, policy makers and administrators, extension workers, para-professionals, farmers, and entrepreneurs.

b. Preparation and implementation of a plan of action for the establishment and operation of a national information system based on existing infrastructures, the co-ordination of the various systems and services, the identification and correction of deficiencies, the filling in of gaps and the productive interaction with regional and international information systems and programmes.

c. Ensuring support for the components of the national information system including information manpower, facilities, and technologies through public and other forms of financing and collaborative arrangements.

d. Ensuring cohesiveness and sustained growth of the national information systems by formulating and prescribing policies and guidelines for assigning areas of responsibility, choice of means and methods, priorities, financial arrangements and co-ordinating mechanism in conformity with the country's development objectives and plans and its political, social and cultural specificities and government structure as these evolve with time.

e. Ensuring support for research on information related theories, practices, education, training for information generation, transfer and use.

The formulation of a national policy on information sets up therefore a strategy for the following series of actions:

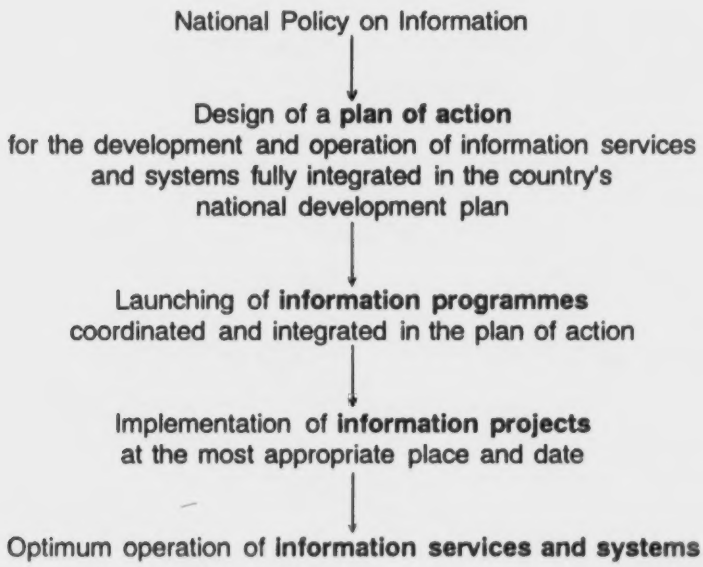
National Policy on Information
Design of a **plan of action**
for the development and operation of information services
and systems fully integrated in the country's
national development plan
Launching of **information programmes**
coordinated and integrated in the plan of action
Implementation of **information projects**
at the most appropriate place and date
Optimum operation of **information services and systems**

Fig. 1: Follow up action on National Policy on Information

KEY ISSUES OF A NATIONAL POLICY ON INFORMATION

A national policy on information, whether it is a single policy or a set of policies, usually covers the following main issues in the field of information:

1. the development of information resources and services including the generation and collection of information, information manpower, technology and facilities, ...

2. the provision of access to information and its effective dissemination including such areas as marketing of information resources, information resource management, ...

3. the promotion of the effective use of information including training users to seek and apply information and raising their perception as to the value of information, ...

4. the development and coordination of national information activities including the operation of a decision support system, evaluation, ...

5. the participation in international information activities including such problem areas as transborder dataflow, information technology transfer, information resource-sharing networks, ...

FEATURES OF A NATIONAL POLICY ON INFORMATION

The growth of the national information resources and services can take place in various situations:

1. countries which have poor information infrastructures and no policy, which is often the case of the least-developed countries;

2. countries which have information infrastructures but have no policy; these could be either advanced-developing countries or developed countries which have established already some information services but have not clearly identified a national agency or legislation on the matter(33);

3. countries which have an information policy but no or little developed infrastructures; these can be developed or developing countries which have already worked on the formulation of a legislative framework;

4. countries which have elaborated information infrastructures and have a policy or policies; these are advanced countries which do not lack policies but lack harmonization in their proliferation(32).

There are two common features to all these cases:

- information policies closely interact not only with policies in libraries and archives but also with policies in such rapidly converging fields as informatics and telecommunications;

- information policies often respond to specific stimuli at specific period of time and must therefore be flexible.

CHAPTER III

METHODOLOGY AND PROCEDURES

- Introduction
- General Methodology
  1. Main characteristics
  2. Preconditions for the formulation
  3. Major phases

CHAPTER III

METHODOLOGY AND PROCEDURES

INTRODUCTION

This chapter examines in the light of the concepts and principles described earlier, ways and means of achieving the formulation and implementation of a national policy for the development and management of national information resources and services. It explores the various steps in drafting the policy text, in designing a plan of action, in setting up a strategy for the implementation and operation of the plan and in motivating the professional communities concerned to support these activities.

Past experiences in formulating national information policies met two principal difficulties: theories in the field of information policies are not yet fully developed; and information on information policies is not well organized, because it is often scattered among various governmental and nongovernmental institutions. Indeed when national authorities decide to formulate an information policy for their country they are often confronted with a number of fundamental questions:

- how to create a social environment appreciative of the value of information and the need for information policies (information awareness)?
- how to identify the goal, needs, concept and coverage of a national policy?
- how should the policy be formulated?
- how to mobilize the information community in the effort of formulating a national policy on information?
- how to gain support of managers and decision makers in presenting the policy to the government for adoption?
- how to ensure the implementation and operation of the national policy on information?

This chapter addresses all these questions in presenting a step-by-step methodology which provides guidance: (a) for the development of a comprehensive national policy or set of policies, sensitive to new technologies and their rapid development, and responsive to users and producers of information alike; (b) for the consolidation of the national policy machinery which will ensure that the policy is adaptable to future changes.

The methodology includes the following major phases:

a) formulation of the national policy or policies on information;

b) adoption of the national policy or policies on information;

c) implementation of the national policy or policies on information;

d) operation of the national policy or policies on information.

GENERAL METHODOLOGY

1. MAIN CHARACTERISTICS

The methodology described in this handbook has the following major features:

(a) The methodology emphasizes the promotion of a national policy on information and its implementation rather than the organization of information resources and services. In the past, there were many attempts made to approach information policy issues by exploring the development of information resources and services at institutional and national level and by focusing on the establishment of information infrastructures (4, 5, 10). Some of these studies provide invaluable guidelines on the management of information resources and services, however, they were not truly dealing with policy formulation issues at the national level. In contrast, the present methodology aims at listing the actual actions that need to be undertaken in the formulation of a national policy on information; it provides the ways and means to design a policy framework and to finalize the policy statements;

(b) The methodology is aimed at being practical. It does not give an itemized list of concepts, principles or arguments in support to the formulation of information policies. Such comprehensive enumerations were provided in many earlier studies including several Unesco's publications (4, 6, 7, 8, 9). The methodology leads to a systematic planning and implementation of an information policy and leaves room for various alternatives to respond to unforeseen constraints;

(c) The methodology takes into account the fact that a variety of information policies or policies closely related to governmental and nongovernmental information

activities exist already in most countries in various forms and levels of comprehensiveness. Public and private institutions usually elaborate numerous regulations, agreements and guidelines aimed at gathering and protecting information they need to meet their specific economic, social or political goals. Many of these were successfully implemented and serve now as valuable yardsticks for the operation and development of specific activities but their fragmentation often creates a chaotic situation. With the advent and convergence of modern information, computer and communication technologies the issues become even more complex. The methodology emphasizes the formulation of conceptual frameworks which would provide national guidance and support to these rapid developments;

(d) The methodology also shows that there are many common features among centralized and decentralized information policies, national and sectoral information policies, policies for government information only or policies for other types of information regardless of their original source; thus methodologies and procedures used at the national level could also be applied to the sectoral or institutional level;

(e) The methodology strongly emphasizes that the formulation of a national policy on information is, as for any other sector of development, a national matter which requires first of all a national recognition of the importance of having such a policy. Indeed, the formulation of the national policy on information will succeed only if the information community and government decision makers are fully motivated and actively participate in this process;

(f) It is recognized in the present methodology that there are so many variables affecting the policy-making process that it will be erroneous to consider it as a universal prescription suitable to all cases. The methodology only gives a basis for reflection and a general agenda for the preparation of a national policy on information to guide the development and management of information resources and services. It is up to each individual country to see how it can be adapted to its specific social, cultural, administrative, political and professional needs;

(g) Finally, it is expected that the policy developed under the guidance of this methodology will ensure that the information requirements of the country are satisfied as fully, promptly and cheaply as scarce resources allow.

2. PRECONDITIONS FOR THE FORMULATION

The formulation, implementation and operation of a national policy on information depend on several prerequisites at the national level. They could be:

- **educational** i.e. the need to develop information-oriented educational systems;

- **economic** i.e. the need to assign sufficient financial and infrastructural resources to develop the information services;

- **political** i.e. the need to place information activities among the priorities of development;

- **administrative** i.e. the need to identify an administration strong enough to take the leadership in the formulation of policy on information;

- **professional** i.e. the need to convince the information professionals themselves about the necessity to have a national policy on information.

Before launching the process of formulating a national policy on information one should ensure the conditions are right for such an action:

2.1 Time selection

One should in particular:

a. foresee a period long enough to achieve all the steps necessary; it is estimated that approximately 1.5 to 2 year period with the same political administration is an appropriate length of time;

b. select a period most favorable for presenting new policies to government for endorsement and coordination with other policies; approximately a year prior to the preparation of a new development plan seems appropriate.

2.2 Availability of human resources

One should in particular:

a. select and mobilize prominent officials responsible for information resource management in government and private institutions including users' representatives with high level interest in information services;

b. ascertain the leadership by an official(s) with influence in the government;

c. study the possibility of the support of an intergovernmental agency.

2.3 Availability of financial resources

One should in particular:

a. plan an economical methodology so as to minimize expenses;

b. study the possibilities of sponsorship by government or any national agency/institution/committee or from any on-going project funds;

c. study the possibility of requesting an outside multilateral or bilateral aid.

3. MAJOR PHASES

Policy making is an interactive, changing and continuous process. Making a policy for the development of information resources and services requires a range of activities at different levels and a sustained and coordinated effort from all leading national information specialists, decision makers and users groups alike. The preparation of a policy takes a great deal of effort in securing as wide a national cooperation as possible. In practice one could envisage this process in three phases:

- the **formulation** of the national policy on information;
- the setting up of a policy-making procedure for its **adoption**;
- the **planning, implementation** and **operation** of the policy adopted.

Each phase is implemented through a sequence of successive actions leading to a gradual development of the information policy. Every action is further elaborated under a separate chapter (see figure 2).

This is however not the only possible procedure. Many countries have already started to set up their own procedures which may differ from the one described in the following section.

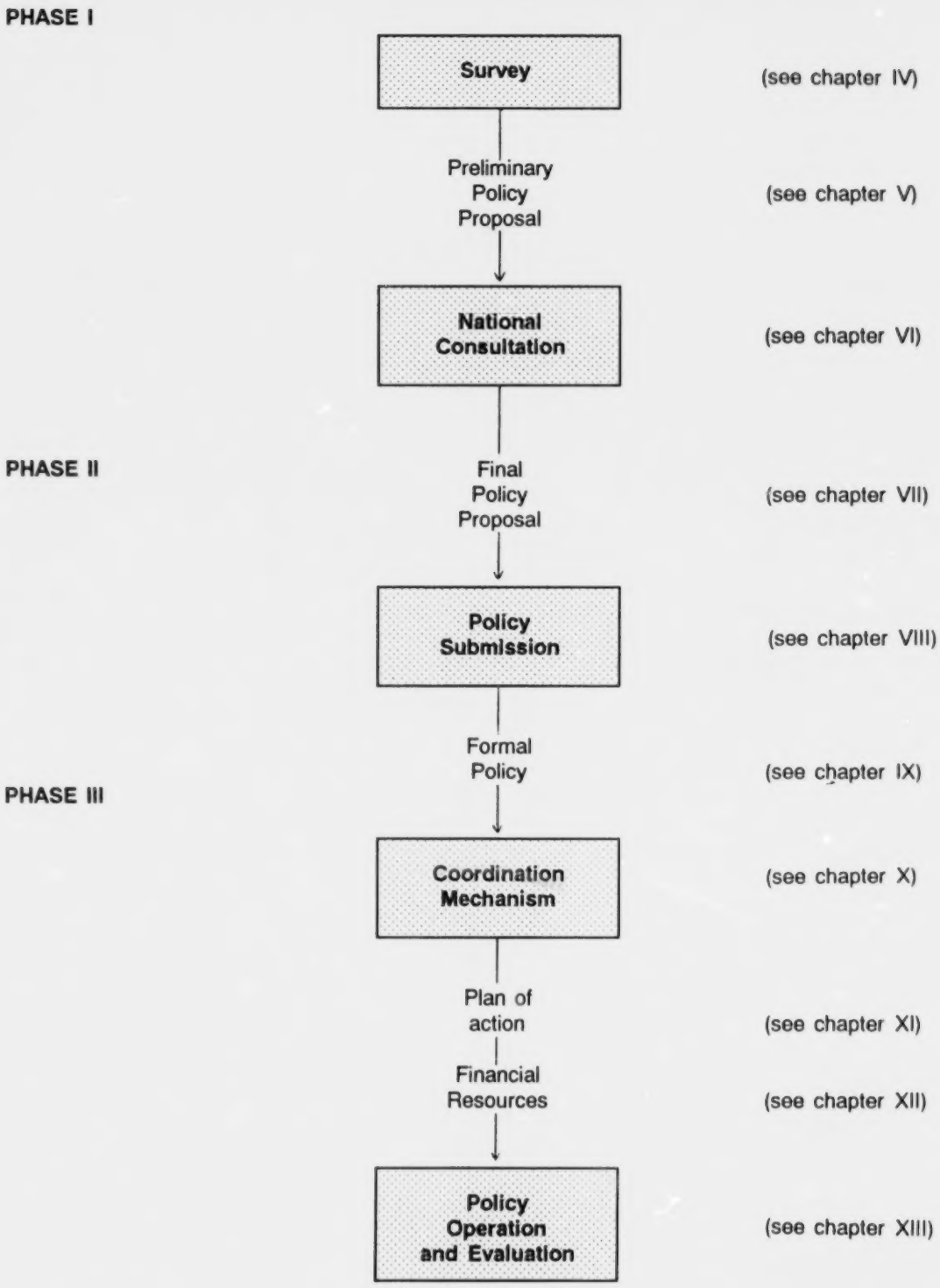

Figure 2: Successive steps in the elaboration of a National Policy on Information

PHASE I : FORMULATION OF A NATIONAL POLICY ON INFORMATION

Introduction

Chapter IV – Assessment of the National Information Environment

Chapter V – Preparation of Preliminary Documents for a National Consultation

Chapter VI – Organization of a National Consultation

INTRODUCTION

A national policy for the development of information resources and services often results from a large number of previous decisions and actions taken during an indefinite period of time. The formulation of such a policy should be based on this past experience. It should be also dictated by current information needs and by foreseeable expectations from future information services.

The formulation of a national policy on information normally leads to four major results:

- the definition of the overall **goal** of the national policy on information and the justification for its **need**;
- the assessment of the national **concept** and **scope** of the national policy on information;
- the identification of the major **issues** to be included in the national policy on information.
- the selection of the main steps of a **strategy** for the implementation and operation of the national policy on information.

These needs can be achieved by, firstly, investigating what has been accomplished so far and what are the current information and information policy requirements. The results of this investigation will help to decide what elements should be incorporated into the information policy so that they best serve the improvement of national information resources and services.

There are many ways of formulating a policy. In most cases, policy is established by custom. In the cases of individual agencies, corporations or institutions information policy is simply implied in the broader policies of the parent organizations (government department, industrial firms, universities, councils ...). In other cases, formal statements of national policy for information have been issued or embodied in existing legislations such as legal deposit, copyright, freedom of access to information, ... (8). The best policy is the one which is explicitly stated in a written legal form and meets national consensus.

The methodology for the formulation of a national policy on information includes therefore three stages (see figure 3):

- the assessment of the national information environment;
- the preparation of preliminary documents for the national consultation;
- the conduct of a national consultation for the formulation of the policy.

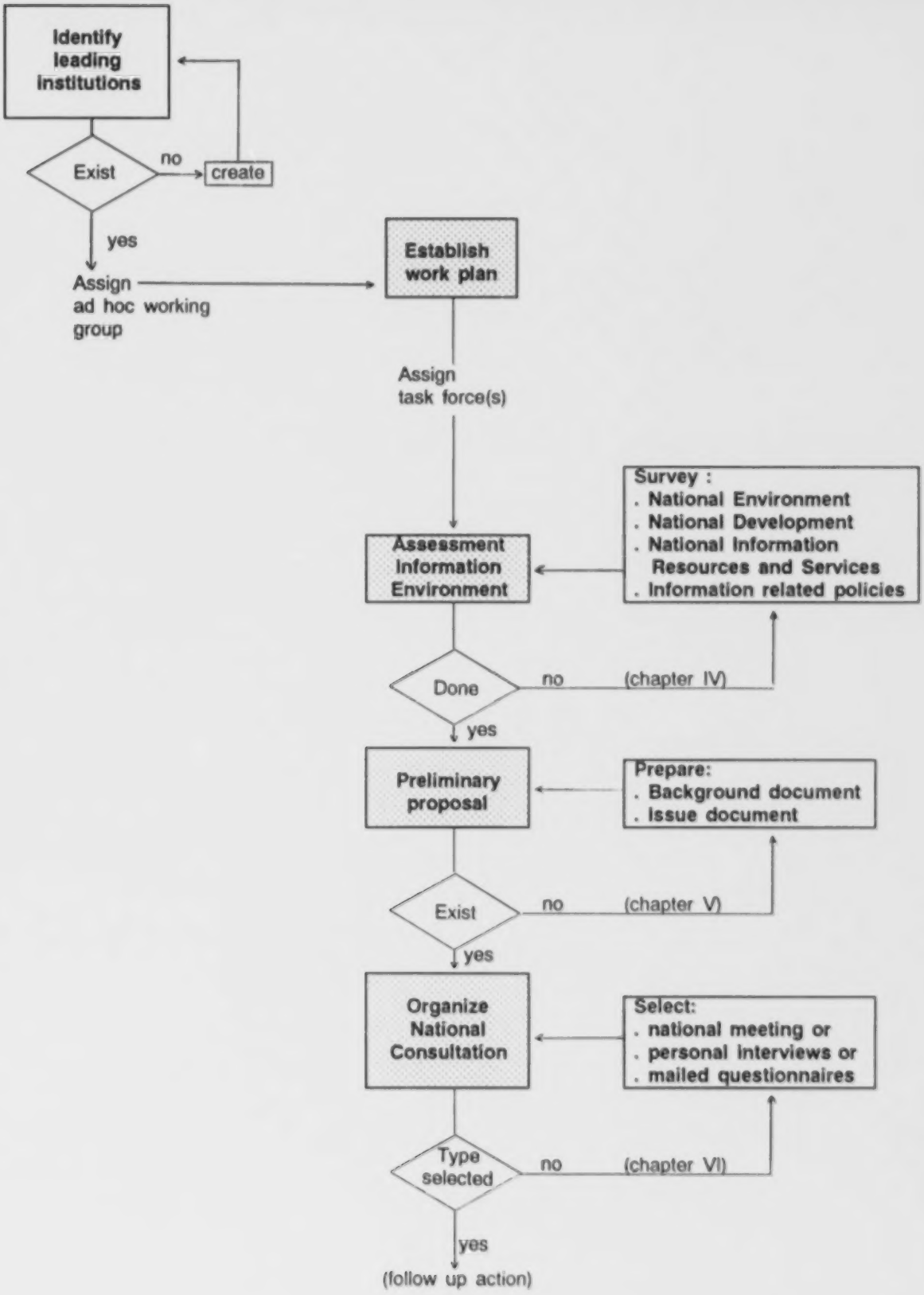

Figure 3: Phase I - Formulation of a National Policy on Information

CHAPTER IV

ASSESSMENT OF THE NATIONAL INFORMATION ENVIRONMENT

A – Objectives

B – Coverage

- B.1 General indicators
- B.2 Indicators on information resources and services
- B.3 Indicators on information related policies

C – Procedural aspects

D – Selected list of Unesco guidelines for data collection at the national level

CHAPTER IV

ASSESSMENT OF THE NATIONAL INFORMATION ENVIRONMENT

A - OBJECTIVES

A comprehensive assessment of the national information situation will permit (a) to obtain a good understanding of the available information resources and services (b) to find out existing information or information related policies (c) to determine the goals, coverage and nature of the new policies and (d) to decide who should be included in the working team.

There are many ways to carry out the assessment. However, whatever approach is selected, it is always helpful to first identify the important elements or indicators that influence the development of present information resources and services and the policies governing them. These indicators are found at every level of management, from the national level to the level of individual institutional administrations. Therefore the surveys shall include (a) the general physical, economic and political situation of the country; (b) the nature and capacities of available information resources and services inside and outside the country; and (c) the nature and relevancy of current information policies.

B - COVERAGE

The assessment could therefore be based on three broad sets of indicators:

- General indicators
- Indicators on information resources and services
- Indicators on information related policies.

B.1 **General indicators** (7, 11, 16)

These indicators describe the country's overall environmental conditions and developmental goals. They can be identified by surveying the environmental and developmental variables.

The conduct of the survey is not always felt as necessary by those who are in charge of the formulation of a national policy on information, because they assume that they already have a sufficient knowledge of their country's situation. Nevertheless it should be remembered that defining the goal of a policy for the development and management of national information resources and services, in line with the concepts defined in the previous chapter, would imply a good understanding of (a) the country's major goals and priorities in the social, economic and cultural development and (b) the role and marketing value of information in this development.

While the broad national goals of information activities are very similar for every country, the emphasis on specific objectives may vary from one to another; a study of the variables which affect these objectives provides useful guidance on the general role played by information resources and services in the development of the country and contributes to the understanding of the country's potential in using these resources and services.

A checklist not necessarily comprehensive of general indicators (environmental and developmental) leading to an assumption is shown in Annex A as examples. The **environmental indicators** are related to physical, economic, social, political and cultural aspects of the country. The **developmental indicators** show the government choice of priorities in pursuit of its national goals. Not all of them need to be selected during the conduct of the survey.

B.2 **Indicators on Information Resources and Services** (7, 11, 12, 27)

These indicators should provide information on the country's current capabilities to provide information resources and services. The survey aims at measuring the amount of information generated and collected in the country and how it is processed, disseminated and used. It mainly concerns collecting information on institutions performing these activities, their resources (collections, human, physical facilities and financial) and their users. The ultimate goal is to understand the relevancy and efficiency of the information resources and services to the country's developmental goals and to identify the information requirements for achieving them.

The information derived from such an inventory should provide knowledge on:

- currently available resources and services
- gaps and overlaps in these resources and services
- information resources and services required to satisfy the development goals
- parameters which will need to be considered for improving the information infrastructure
- a starting point from which future progress can be evaluated.

A checklist, not necessarily comprehensive, of such indicators is shown as examples in Annex B.

B.3 **Indicators on information related policies** (7, 11)

The knowledge of the existing information policies and policy-making machinery is of primary importance for the formulation of a national policy on information. It is essentially from this information that one will be able to identify the type and scope of the policy most appropriate to the national situation. Countries often restrict the coverage of their information policies to information resources and services accessible to the public and often limit it to the "problem solving" information excluding mass media information. There are, however, important variations i.e. some prefer to talk about national STI policy, while others wish the policy to cover all types of information. Similarly, the concept, described earlier, that information should be considered as a national resource having an important marketing value and as such should serve the country's social, cultural and economic development, is emerging only slowly in the countries and is perceived quite differently from one state to the other.

For these reasons the survey of the existing information legislations (constitutional laws, common laws, statutory controls, enacted statutes, national guidelines, decrees, ...) needs to be carried out with particular accuracy and precision to show the overlappings, inconsistencies and contradictions in the policy texts currently in force. The information thus collected serves three main purposes:

- to evidence the need for a national policy on information;
- to appraise the level of recognition of this need among the professionals and users at large;
- to identify the gaps and inadequacies in the existing policies.

Examples:

1. ***SCOPE AND COVERAGE OF CURRENT POLICIES*** *(fig.4)*

Provides a measure of the role information policy is currently playing in the country, and hence arguments for its formulation.

1.1 Existing policies, national, regional, sectoral, departmental, institutional or others, concerning the development of information resources and services (libraries; archives; documentation centres; ...)

It is assumed that the larger the number of these policies and the more varied they are the more important the need will be to correlate them to each other.

1.2 Existing elements of information policies in general policies for broad areas of development (i.e. science and technology; agriculture; energy; health; ...)

It is assumed that the more integrated the policies are in the overall sectoral policies the more general they tend to be and the more elaboration they will need.

1.3 *Existing policies in areas interrelated to the field of information (i.e. policies on informatics; telecommunication; publishing; ...)*

It is assumed that the more independently these policies were developed from one another the more effort will be necessary to harmonize them.

1.4 *Existing policies in broad national administrative, political, social or economics concepts (i.e. free flow of information; copyright; legal deposits, ...)*

It is assumed that the more numerous and complex are the broad national policies (across all sectors of development) the more difficult the integration of the national policy on information will be.

2. ***CURRENT MECHANISMS FOR INFORMATION POLICY FORMULATION AND ENFORCEMENT*** *(fig.5)*

Provides a measure of the role and degree of interest of information professionals, legislators and users in formulating an information policy.

2.1 *Current role of the national government and of any subnational governmental authorities in the national information domain (i.e. planning, management and operation of the programmes, systems and services; use of technology; information resource building and delivery; development of telecommunication facilities; manpower development; support to R & D in information; cross border data flow; marketing of information, ...)*

It is assumed that the greater the government commitment to information activities the easier the implementation of a national policy on information will be.

2.2 *Current structured framework for the formulation of information policy (i.e. commissions; committees; task forces or established groups mandated to draw legislation on issues related to handling and transferring information; agencies working on relevant issues such as open access; privacy; policy-making bodies and instruments; ...)*

It is assumed that the more organized are the current mechanisms, the easier the implementation of a national policy on information will be.

2.3 *Current coordinating mechanisms established for the implementation of information policy (their terms of reference; responsibilities;...)*

It is assumed that the more developed are these mechanisms the easier the implementation of a national policy on information will be.

2.4 *Current attitudes towards the development of information resources and services and their use (i.e. degree of support from industries; academies; economists; politicians; planners; ...)*

It is assumed that the more unrestricted these attitudes are the more interested these professionals will be in getting an active role in formulating policies.

2.5 *Current sources of funding for the information activities (national; state; sectoral; institutional; international; private ...)*

It is assumed that the more numerous and important the sources are, the more needed the formulation of policies will be.

2.6 *Current status of qualified information manpower in academic, government and industrial institutions compared for instance with researchers, engineers and managers.*

It is assumed that the higher the level of recognition of information specialists as full fledged professionals the better the existing policies will be.

2.7 *Current status of information related research.*

It is assumed that the more important research is the more policies will be needed concerning its areas and output.

3. *GAPS AND INADEQUACIES OF NATIONAL INFORMATION POLICIES*

Provides a measure of aspects not covered by current policy or requiring more precise or amended legislations.

3.1 *Main elements of current policy (related to the principal aspects of information activities both general and sectoral)*

It is assumed that more elements are not covered more legislation will be needed to tackle the remaining problems.

3.2 *Sectors of development with no information policy (industry; agriculture; health; environment; energy; others in government; others in educational/research institutions)*

It is assumed that the larger the number of sectoral policies with no reference to information policy the more the need for formulation of a national policy on information will be.

3.3 *Past efforts to create organizational structures to coordinate information activities*

It is assumed that the previous attempts in formulating a policy should point out the inadequacies.

3.4 *Extent to which unqualified manpower moves into information work and qualified manpower moves out*

It is assumed that the greater this movement the more need for manpower policy will be.

3.5 Current financial resources in percentages per sector or department, or service (libraries; documentation and referral services; ...)

It is assumed that more funds are made available for these institutions more important the necessity to draw up policies will be.

3.6 Extent to which existing information resources and services (libraries; national documentation centres; ...) serve the national and local industries and businesses

It is assumed that the weaker this link the more need for a policy for its support will be.

C - PROCEDURAL ASPECTS

C.1 **Identify a leading agency/institution/ministry which may organize and** coordinate all the activities necessary for the formulation of a national policy on information.

There are several possibilities:

- the country has already a public or private body whose functions include the follow-up of information activities (i.e. National Council on Information, National Library Services, etc. ...);
- the country has no such body but is able to identify an agency which can take up this function (ministries, National Documentation Centre, National Library, ..);
- the country has no such body, cannot identify an agency and decides to create such a body (National Information Coordinating Body, National Council on Information, ...).

This procedure is further described under Chapter X of the present methodology.

C.2 **The organization of the work for the formulation of a national policy may** start with the creation of a small ad hoc working group who will be assigned to set up and carry out a workplan.

a) to assemble all the background documentation, particularly from earlier surveys and publications;

b) to prepare preliminary drafts of the goal, needs, concepts and scope of the national policy on information;

c) to organize the national consultation on the subject. This Chapter deals only with the first function. Functions (b) and (c) will be further developed respectively under Chapter V and Chapter VI.

C.3 **The first task of the ad hoc working group is to collect all quantitative and** qualitative information needed to serve as background against which one could prepare a good draft definition of the goal, needs, concept and scope of the National Policy on Information Resources and Services.

The best sources of information on the indicators cited under section B (1, 2 and 3) above are:

. the existing relevant surveys and publications carried out by the country or for the country by outside consultants or organizations;

. the consultation with governmental and nongovernmental agencies concerned including the national planning organization, individual departments and information handling institutions;

. if necessary the conduct of additional surveys aimed at completing the already available information.

The assessment of the existing policies could be conducted on the basis of two sets of parameters:

. the types of institutions in which the handling of information constitutes a major part of the work, i.e. libraries, archives, STI, informatics, telecommunications, publishers including mass media, producers of data bases, banks, records centres, etc.

. the levels of decision of information policy-making bodies or policy-making processes, i.e. committees, council, sectoral machinery, coordinating machinery.

Both sets of parameters are evolving with time. It is therefore best to present them in a chronological order. The results of the survey could be conveniently summarized in two tables as shown with the hypothetical examples in figures 2 and 3. Figure 2 shows how one can clearly represent the evolution of the national policy instruments at different levels of the policy-making process through time. Similarly, figure 3 shows an easy way of presenting the development process of information policy-making mechanisms. The examples used inside the table do not necessarily show the sequence that should be followed.

The presentation in a tabular form has several advantages:

- it provides a clear and brief summary of what was done in the past, of the overall evolution and of the current status;

- it allows an easier identification of the errors committed and existing shortcomings in the present policy;

- it provides a useful blue print for future action in the development of the policy-making process.

Examples of survey summaries:

YEAR / ORIGIN	Year 1	Year 2	Year 3
Broad Government Policies*		ex: Copyright Law	ex: - Patent Law - Inf. Techn. Transfer
Information Institutions Policies	ex: National Library Policy	ex: National Data Centre	ex: STI Information Policy
Development Sectors Policies		ex: National Agricultural Policy	
Policies in related Fields (Telecommunication, Statistics Information, etc.)	ex: Telecommunication legislation	ex: Census Bureau Legislation (statistics)	ex: Informatics Policy

* including international agreements

Figure 4: Survey summary showing the evolution of a national policy on information in a given country (examples are mere indications of the type of policy instruments to be reviewed).

YEAR / ORGANS	Year 1	Year 2	Year 3
Government Authorities	ex: Committee on Scientific and Techn. Information	ex: Federal Council on Data Processing	ex: Government Task Force on Libraries
Academic Authorities	ex: Research Project on Info. Technology Transfer	ex: Advisory Committees	ex: University Associations
Business Authorities	ex: Chamber of Commerce	ex: Association of Industries	
Users Authorities		ex: National Association of Librarians	

Figure 5: Survey summary showing the development of mechanisms for information policy formulation and enforcement (examples are mere indications of the type of organizations to be reviewed).

D - SELECTED LIST OF UNESCO GUIDELINES FOR DATA COLLECTION AT THE NATIONAL LEVEL

There are a number of guidelines published by Unesco which could assist the countries in the collection of the above background information (13, 14, 15):

- Wesley-Tanaskovic, I. - *Guidelines on National Policy on Information: (Scope, Formulation and Implementation).* Paris: Unesco, 1985.
  Addressed primarily to decision makers and planners in government responsible for launching a national policy on information, the guidelines in this study: indicate how to identify information requirements and to design means for meeting them; define how to formulate a national policy on information that takes account of existing realities by instituting appropriate procedure and special committees; specify the factors to be borne in mind for implementing a programme; determine how to establish a national information co-ordinating committee.

- Vilentchuk, L. - *Guidelines on the Conduct of a National Inventory of Scientific and Technological Information and Documentation Facilities.* Paris: Unesco, 1975.
  Aimed at those who approach the task of making a comprehensive inventory of existing resources for the first time. The publication provides a methodology of inventory taking, presents the technique in a tabular form, gives examples of the useful by-products generated from the survey and discusses techniques of keeping the inventory up-to-date. Appendices include a detailed questionnaire for normal and machine- processing guidelines for interviewers, examples of statistical tables, examples of by-products and a model circular letter.

- Delmas B. - *User Needs and Archive Facilities.* Paris: Unesco, 1977.
  Discusses the methodology for analyzing user needs and the resources held in the archives with several examples of questionnaires for the evaluation of archives and access to documents.

- Unesco/PGI - *Guidelines for the Preparation of Country Reports.* Paris, 1979 (unpublished working document).
  Gives an annotated list of questions and topics to be covered in an assessment of the use of scientific, economic and technological information and the transfer of information technology for the national development.

- Evans, F.B. - *A Guide for Surveying Archival and Records Management Systems and Services: a RAMP study.* Paris: Unesco, 1983.
  The combined questionnaire and statistical report that make up this document are intended to cover the diversity of archival systems and services, while placing emphasis on what have emerged as the basic functions and activities of all programmes that meet minimum professional standards. The study aims not only at analyzing existing resources and how they are managed but also at indicating what a fully-developed and professionally sound programme should encompass.

- Poncelet, J. – *Guide for the Establishment and Evaluation of Services for Selective Dissemination of Information.* Paris: Unesco, 1980.
  This guide describes the components of a selective dissemination of information (SDI) service and explains how to create and evaluate this type of service. It defines the main features of a computerized documentation system, describes the CDS/ISIS and CAN/SDI software packages which Unesco makes available to its Member States. Finally, it attempts to chart the place of SDI services in the development of national infrastructures, mainly with a view to improving access for developing countries to world sources of information. The results of the evaluation of two SDI services developed with Unesco's assistance and the questionnaires used in obtaining those results appear as annexes.

- Lancaster, F.W. – *Guidelines for the Evaluation of Information Systems and Services.* Paris: Unesco, 1978.
  These guidelines deal with a wide range of activities carried out by information centres. They are intended to suggest criteria and methods by which to evaluate some or all of these activities. They have been made broad in scope in order to have the widest possible applicability. Emphasis is on practical examples. The study is in five parts: general considerations on information transfer and evaluation levels, criteria and stages, evaluation of document delivery: collection, availability; evaluation of information retrieval, efficiency, cost/effectiveness, cost/benefit; evaluation at national and international levels.

- Wollman, P. – *Guidelines on the Conduct of a National Inventory of Current Research and Development Projects.* Paris: Unesco, 1975.
  Working paper presenting guidelines for preparing a national information system and inventory on current research projects related to research and development. Discusses such questions as data collection, manual and automatic data processing, the use of the data base and computer software; considers indexing and classification systems; makes particular reference to science policy and scientific information services: includes examples of questionnaires to be used for data collection as well as block diagrams describing steps for constructing a data base.

- Dulong, A. – *Guidelines on Referral Centres.* Paris: Unesco, 1979.
  The effective exploitation of inventories calls for the establishment of operational referral centres accessible to all. These perform the following functions: creating and updating inventories, referring users to adequate sources, and enhancing the latter through feedback. Methods for setting up and operating such centres are discussed and elucidated with the aid of examples. Possible uses of information collected are scrutinized. The need for international co-operation among referral centres is emphasized and the possibility of a world information network envisaged. The study concluded with a diagram of the principal steps in establishment and development of a referral centre, a list of addresses and a bibliography.

- Atherton, P. – *Handbook for Information Systems and Services.* Paris: Unesco, 1977.
  Monograph describing information systems and information services, and presenting a guide for the information science training of students and science personnel of the developing countries – discusses some information policy goals and planning including documentation/library administration: deals with the documentation/library role of national information systems in national development: also studies information user needs and various types of documentation, library operations and specialized services to meet them: stresses the importance of documentation/library facilities: refers to curriculum development for training programmes, including international training programmes, for improving documentation/library.

- Moore, N. – *Guidelines for Conducting Information Manpower Surveys; Part I (Manual) and Part II (Questionnaires and accompanying documents).* Paris: Unesco, 1986.
  Part I presents all the information and guidance required for the development and implementation of a workforce planning system for the library, archive and information sector. The manual can be used for surveys. Part II provides the instruments for carrying out such surveys.

- Kathpalia Y. P. – *Conservation and Restoration of Archives: a Survey of Facilities.* Paris: Unesco, 1978.
  The present publication updates and significantly supplements the study on conservation and preservation of archive materials published by Unesco in 1973. Its presentation of conservation and restoration problems and its analysis of policies and practices observed in very many countries make it a valuable source of information. It deals with both theoretical and practical aspects in some depth, and gives a clear picture of facilities for implementation, manpower training and testing results.

- Guinchat C; Menou M. – *General Introduction to the Techniques of Information and Documentation Work.* Paris: Unesco, 1983.
  This manual is intended for all those who, in developing countries, begin their careers in information units without any basic training in information science and techniques, though with a general qualification equivalent at least to the completion of secondary education, and who may be asked to perform various more or less specialized tasks. Its aim is to help them perform this work more effectively by providing them with a practice on all present-day activities connected with information. More particularly, this manual should enable them to find a description of the various operations, instruments and concepts related to information systems sufficiently detailed to serve as a guide.

- Agudo Guevara, A. – *A Study of Public Library Users in some Countries of Latin America and the Caribbean.* Paris: Unesco, 1984.
  A survey was carried out as part of the preparations for the Regional Meeting in the Present Situation and Strategies for Development of Public Library Services in Latin America and the Caribbean (October 1982) at three levels: the political

and administrative authorities responsible for public libraries, the libraries themselves, and users of their services. The results of the survey at the third level are presented in this work. The document is divided into two sections: objectives of the survey, methods used, number and type of participants; analysis of data obtained and conclusions drawn. The annexes contain the questionnaire and statistical tables giving the results.

- Greene G. Robb, R. *Second Survey of Library and Information Manpower Needs in the Caribbean: Vol. I. The Survey and its Findings: Vol. II, Statistical supplement.* Paris: Unesco, 1985.
The Caribbean being highly varied a development policy for information services in the region cannot be drawn up without a thorough grasp of the number, training, qualifications, experience and mobility of the personnel concerned. A questionnaire was prepared in order to identify all the aspects of the subject; the results of the survey of the features of personnel involved in information, as well as their expectations, attitudes and evolution, are described and analyzed in volume I. Volume II presents in tabular form all the data obtained from the study.

- Unesco, *Methodological Approach for Identifying the Information Needs of the Engineer.* Paris: Unesco, 1984.
This study begins by defining what is meant by 'information needs of the engineer'; it then explains the purpose of analyzing those needs: to create and manage information facilities and implement a policy for the benefit of engineers. It covers in particular the following topics: availability of information resources at the national level; expansion of the scope of the scientific and technological information service; accommodation to rapid technological change; interdependence of national information systems.

- Hill M., *National Information Policies: A Review of the Situation in Seventeen Industrialised Countries, with particular reference to scientific and technical information.* The Hague: Unesco/FID, 1989.
This comparative study compiles information collected on the state of national information policies in Austria, Belgium, Canada, Czechoslovakia, Denmark, Finland, France, Federal Republic of Germany, Hungary, Japan, Netherlands, Norway, Poland, Spain, United Kingdom, USA, USSR. The study contains rich information, normally accessible to the public on the evolution of information policies in those countries. A written questionnaire used for this survey is annexed to the study.

CHAPTER V

PREPARATION OF PRELIMINARY DOCUMENTS

A – Objectives

B – Types of documents

B.1 Background document

B.2 Policy issues document

B.3 Other documents

3.1 Institutional profiles

3.2 Procedural documents

C – Procedural aspects

CHAPTER V

PREPARATION OF PRELIMINARY DOCUMENTS

A - OBJECTIVES

The preparation of preliminary documents serves two main purposes:

- to ultimately consolidate a national case study on the information resources and services in the country for easy reference;

- to provide a basis (preliminary policy proposal) for a constructive nation-wide consultation on the issues related to a national policy on information.

These can be achieved by (a) organizing the information collected during the surveys (Chapter IV) into a comprehensive background document and (b) analyzing this information in order to extract the principal problem areas which are most likely to influence the national policy on information and should therefore be reviewed at the national level. The latter could constitute the main working document for a national consultation. In doing this some countries prefer to include both the background and the analysis into a single document. This choice however has no significant impact on the consultation. More important are the content of the collected information and its arrangement into selected issues. They will therefore be examined below as two separate documents.

B - TYPES OF DOCUMENTS

B.1 Background document

a. *Content*

The background document should give a brief overview of the information scene in the country. The survey (Chapter IV) could be advantageously used

in the preparation of such an overview. The document however should not be a mere inventory of what exists and what does not. It should provide a resume related to the formulation of a national policy on information. Brevity should be achieved by concentrating on the main features and problems of the country, omitting unnecessary details.

b. *Format*

The lay out of the background document should be given special attention, as it is intended to be a reference document not only to the information experts preparing the national policy but also to administrators, decision makers and legislators who are not in the field of information and whose task will be to approve this policy. It is of particular importance to outline the document so that it clearly indicates the strengths and the weaknesses of the current information systems in the country.

The presentation of the background documentation should also be such as to facilitate the identification of the issues in information policy. Aspects which need to receive greater attention from those responsible for the elaboration of the problem areas in the working document should be emphasized.

Example

Basically the background document should include some indications on the following national aspects (16, 17):

***Introduction**:*

(Physical, social, cultural, economic and administrative environment.)

***Assessment of major national goals**:*

(The conceptual, national and sectoral priorities in the national development plan.)

***Assessment of national information resources**:*

(The major information institutions, their resources and services.)

***Assessment of national users**:*

(The major types of institutional and individual users, their needs and information requirements.)

Assessment of current information policy situation:

(The scope and coverage of such policy, mechanisms for their formulation and enforcement, and their inadequacies.)

Conclusion:

(The need for national policy on information, the level of its recognition and the main constraints/facilities for its development.)

B.2 **Policy issues document**

a. *Content*

This is the main document for the national experts to work on. It includes:

- the definitions of the goal, needs and concepts most appropriate to the national policy on information in the country. The text should stress that information resources and services need to be recognized as a national resource which contribute to the overall national development and which should be planned as an integral part of such a development.

- a principal part which identifies the various issues of specific policy statements which should later be incorporated into the overall national policy. The number of issues may vary from country to country; so does their nature and importance. Nevertheless it is usual to see the experts select more or less similar issues, with slight variations in emphasis.

Examples of policy issues (18) are shown in Annex C.

b. *Format*

At this initial stage the national policy or policies with regard to the development of information infrastructures and their management including training and research programmes could be stated in a form of a broad policy statement. The statement will be simply drafted and deal with basic general principles in order to:

- have a better chance of being accepted at all levels of decision-makers from information professionals to legislators and politicians; and

- minimize the need for future revisions as the situation changes.

The value of such a statement lies not only in the text itself, but also in its implications since by issuing it the government:

- acknowledges the importance of information;

- accepts the primary responsibility for ensuring provision of information services to the appropriate users;

- recognizes that the national plan for the development of information resources and services should be integrated in the national development plan;

- recognizes the need for coordinating national information activities.

The identified issues should be formulated separately in a form of specific policy statements. Each of them followed by a list of possible steps or strategies for its implementation.

Examples of policy statements and related strategies (2) are shown in Annex D.

B.3 Other documents

There are two additional types of documents:

- specific institutional profiles (state of the art)
- organizational documents for the consultation.

1. INSTITUTIONAL PROFILES

Any existing published or unpublished documentation on the national situation with regards to information resources and services may be of value to the identification of policy issues. Any institutional or personal experience of individual information experts is particularly interesting to know. If this information does not exist or cannot be easily identified, it is often helpful to request the institutions and/or individuals participating in the project to prepare an institutional profile on their activities including their cost-benefit aspects. In this case it is better to provide the potential contributors with a format for consistent presentation which would permit a comparative assessment and ease the identification of the real issues.

An example of guidelines for the description of institutional information activities (12) is shown in Annex E.

2. PROCEDURAL DOCUMENTS

These are documents which include:

- the workplan for the project

- the agenda or tentative programme for the consultation
- the list of selected participants.

These will be described under Chapter VI.

C - PROCEDURAL ASPECTS

C.1 **The organization which is coordinating the project could also be responsible** for the preparation of the background document, the policy issues document, the institutional profiles and the procedural documents. The ad hoc working group may be assigned (as their second task) the preparation of these documents.

C.2 **The selection, analysis and presentation of information in the first two** documents (background and policy issues) should be carried out in close cooperation with the most appropriate government planning body at as high a level as possible (ideally the planning ministry) and with each individual department concerned. The latter may be asked during the surveys to provide relevant literature or specific written statements on the priority issues which in their views should be considered in the drafting of a national policy on information.

C.3 **In performing this task the ad hoc working group may find itself confronted** with one of the following three possible situations:

- pertinent documents are already available in the country; if these documents provide sufficient background documentation on the state of development of the national information resources and services, including information on the texts governing this development, countries may find it practical to use them as such in order to cut on the expenses and time involved in their preparation. It is therefore essential to first find out whether such documents exist;

- the second situation arises, when one finds out that the needed information exists in the country but is not readily usable because it is spread through various types of documents and different institutions. This is the most frequent situation which requires the collating and assembling of this information into one document;

- the third situation is when literature on national information resources and services is difficult to locate and information from this literature difficult to access and to extract. In this case it is often less time and effort consuming to create new documents; in this situation the preparation of documents should be preceded by a good survey (see Chapter IV).

C.4 **There may be some variations in these situations and very often the** countries may find it necessary to select alternative ways of dealing with them. Other may find it difficult to deal with drafting the documents, because they lack the skilled manpower, or because they find it difficult to secure reliable information on the potential value of untried services, or because they wish to have an external assessment which is often considered to be more impartial. In these cases, assistance from outside experts (i.e. consultancy firms) may be required; if this is the situation this assistance should be carried out jointly with an expert with local knowledge and experience.

C.5 **Developing countries in particular could call international agencies or foreign** experts to assist the national professionals, especially the ad hoc working group in the drafting of the documents. In practice it often means that:

- the expert will draft the documents himself/herself, making the maximum use of material supplied to him/her by the ad hoc working group and their liaison officer;

- the final version of the report must be agreed between the expert and the liaison officer and the ad hoc group which should meet for this purpose.

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CHAPTER VI

ORGANIZATION OF A NATIONAL CONSULTATION

A = Objectives

B = Types of consultation procedures

B.1 National consultation meeting

1. Preparation of procedural documents
2. Selection of duration, dates and participants
3. Provision of meeting facilities and services
4. Procedural aspects

B.2 Consultation through interviews

1. Preparation of interview checklists
2. Selection of institutions and individuals
3. Scheduling of interviews
4. Procedural aspects

B.3 Consultation by mail

1. Preparation of timetable
2. Design and testing of questionnaire
3. Identification of Institutions
4. Procedural aspects

CHAPTER VI

ORGANIZATION OF A NATIONAL CONSULTATION

A - OBJECTIVES (8)

The national consultation serves to expand the groundwork for the formulation of a national policy statement on information. It is used, in particular, to discuss at the national level the policy issues selected and presented by the ad hoc working group i.e. in the background and main documents (see Chapter V). The national consultation is conducted with a view to:

- make the national authorities aware of the need and advantages of having a national policy for the guidance of the development of information resources and services and to acquaint them with the issues involved;

- achieve a national consensus regarding the most relevant themes or elements to be included in a national policy on information and thereof the major implications for their implementation with particular references to the country's social, economic, cultural and political context;

- set up a national operation follow-up mechanism to ensure the endorsement of the policy statement;

- identify a general strategy which would facilitate and enforce the implementation of the policy.

The expected output of the consultation is therefore:

- a general national policy on information statement, or list of declarations that will constitute such a statement;

- a selective list of major issues which need to be covered by the policy and steps for their implementation, including regional and international implications of the policy;

- a proposal for a policy-making mechanism for the coordination and development of activities related to information resources and services;

- appropriate procedure and format for presenting a national policy on information to national authorities for approval.

B - TYPES OF CONSULTATION PROCEDURES

There are three principal ways of conducting a national consultation:

- holding of a national consultation meeting;

- carrying out of a series of individual personal interviews;

- enquiring by questionnaire.

The organizational aspects will differ from one to the other; nevertheless all three should be based on concrete material prepared in advance (i.e. the background and issues documents), should reach the right people and should produce the same outcome. A short evaluation of these three types of consultation is given under each one of them.

B.1 **National Consultation Meeting** (19, 20)

The present methodology strongly favours this form of consultation because it gives the best opportunity for interactive discussion among the participants and for an in-depth study of the subject matter. In addition it gives participants the best sense of first-hand involvement in the project and ensures their future commitment in the follow-up actions. The major disadvantage is that it requires the presence of top officials for several days.

The organization of a national consultation meeting implies:
. the preparation of working documents;
. the selection of the duration, dates and participants;
. the provision of meeting facilities and services.

1. PREPARATION OF PROCEDURAL DOCUMENTS

The documents on the national background and issues constitute the main basis for discussion. They may be supplemented or not with individual institutional profiles. The consolidation of these documents is discussed under Chapter V.

Three additional documents need to be prepared:

- the overall **workplan** for convening the meeting and following up on its recommendations;
- the tentative programme or **agenda** of the meeting;
- the **selected list of participants**.

1.1 Workplan

The workplan for the preparation of the national meeting needs to be prepared as soon as the decision of formulating a national policy on information is taken. It basically provides a schedule for all the events that should take place prior to the meeting and possibly shortly after. It includes information on:

. the constitution by the ad hoc working group of a task force (who should be its members? how many? what is their mandate?);

. the planning of the preparation of working documents for the meeting (how many? what should be their content? who should be entrusted to draft them?);

. the preliminary selection of the date and duration of the meeting;

. the proposals concerning the professional groups or institutions which should be invited to send participants;

. the selection of the organization which will be responsible for convening the national consultation meeting (what institution will provide leadership in the organization of the meeting? which international, multilateral or bilateral technical or financial assistance is needed? the distribution of tasks?);

. the selection of the place, facilities and services for the meeting;

. the scheduling of preparatory meetings to review the above;

. the scheduling of follow up actions immediately after the meeting to ensure the implementation of its results (who should be in charge? during what period? for what purpose?).

1.2 **Tentative programmes (agenda)**

The preparation of the work to be performed by the meeting depends on the duration of the latter. It may last 2 or 3 days for a relatively small country; for a larger country the meeting is often convened for a full working week (5 days). A more elaborate tentative programme may be required for the latter. In both cases the essential part of the agenda should be devoted to:

- the examination of the issues one by one;

- the discussion on the setting up of the follow-up group.

The review of the policy issues is best carried out in small groups. For this reason, it is advisable for the meeting, after it discusses general matter (goal, concept, scope of the policy) in a plenary session to break into three or four working groups. Each group will be assigned to study a cluster of issues (i.e. a topic) and to report the results at the end of the consultation meeting in a plenary. The tentative programme or agenda should reflect this procedure.

Two examples of presenting the consultation programme are shown in Annex F.

1.3 **List of participants**

This list is based on the selection described below which should be as complete and accurate as possible. In particular it should give full titles and full addresses including the telephone, telex and telefax numbers of the persons on the list. Such a list often becomes a reliable national reference for future cooperation at the national level.

2. SELECTION OF DURATION, DATES AND PARTICIPANTS

2.1 **Duration**

The duration of the meeting can vary from one country to the other. It depends on:

. the degree of complexity of the national situation in terms of information policy and on the number of issues to be reviewed;

. the goal that one wishes to achieve through the consultation;

. the efficiency of the preparatory work and especially the quality of the working documents.

2.2 **Dates:**

Several factors may be determinant in the selection of the dates for the meeting:

. the preparation of the budgetary year;

. the schedule of the preparation of the national plan;

. the length of the activities (preparation of the meeting, various agreements, invitations, surveys, ...) that need to be accomplished prior to the consultation;

. the availability of potential participants at a given period of time.

The consideration or not of these factors may result in greater or lesser impact of the consultation and on the rapidity of the planning and implementation processes of the national policy on information.

Budgetary year:

It is assumed that the earlier the date of the consultation in the budgetary year, the easier will be the implementation of the policy during the following budgetary year;

National plan:

It is assumed that the closer (but not too close) the date of the consultation to the drafting period of the new national development plan, the easier will be the incorporation of its outcome in the Plan;

Length of preparatory activities:

It is assumed that the longer the preparations, the longer the postponement of the date of the consultation;

Availability of participants:

It is assumed that the larger number of high-ranked participants attending the seminar, the more important its results will be.

2.3 Participants

Four groups of participants should be invited to attend the meeting:

(a) managers of the main national information and library services and systems, who can contribute their professional experience to the formulation of the policy; they include:

- information specialists i.e. those who are responsible for the major information, documentation, data centres, services and systems of the country. Those are information workers at the directorship level concerned with planning, funding allocations, daily supervision of resources and systems operation, personnel supervision ...);
- librarians from the major libraries of the country and in particular the national library and the university libraries; in certain circumstances they may include archivists. In the developing countries these individuals are often in charge of the best established and best known information resources and services;
- managers of informatics and telecommunication services and systems; those are people whose daily responsibilities are to handle, process and transfer information and data;

(b) government authorities concerned with the development and operation of national information and library services and systems, who can contribute an administrative support to the formulation of the policy; they include:

- officials from any government institutions in charge of supervising information activities in the country (i.e. National Council for Information; National Library Services; ...);
- representatives from major ministries such as planning and financing who could be most instrumental in integrating information activities in the national plan or the justice ministry which could assist in the formulation of a national policy;
- representatives from ministries which have major information operations (i.e. agriculture, education, health, ...);

(c) representatives of the main private sector institutions in which information handling is an important activity, who can be particularly helpful in contributing valuable knowledge on the costs, revenues and marketing aspects of information activities; they include:

- managers of information services in major corporations, enterprises, commercial agencies, whose daily activities often rely on access to and circulation of information;

- representatives from banks, hospitals and other similar institutions which handle large quantities of data during their daily operations;

- publishing houses, press and broadcasting agencies, etc., whose main activity is to disseminate and popularize information.

(d) representatives of the information users groups and the information industry, who can help by indicating to what extent the national information resources and services meet their expectations; these will represent professional associations of:

- administrators i.e. those who require information for decision making and for determining priority areas for national development (policy makers, planners, managers);

- researchers i.e. those who create new products (government, academic, industrial, agricultural, manufacturing researchers);

- practitioners i.e. those who apply research products to the development (engineers, physicians, teachers, extension workers, ...);

(e) foreign experts who have gained experience in the formulation of national policies and their implementation in other countries.

3. PROVISION OF MEETING FACILITIES AND SERVICES

Adequate space and facilities should be provided for the meeting. They should include a conference room for the plenary sessions, several meeting rooms for working-group sessions and office for secretarial work.

Equipment and supplies, such as duplicating machine, overhead projectors, adequate furniture, tape recorders, word-processors and stationary and sundry office supplies must be also ready at hand.

The host institution must also provide sufficient number of local personnel for the needed logistical support during the meeting.

Provisions should also be made regarding the hospitality, especially for the participants who are coming from far away (lunches, coffee breaks ...). An allocation of daily subsistance must be envisaged for such participants.

4. PROCEDURAL ASPECTS

4.1 **The responsibility of organizing the national consultation meeting should** be given to the institution in charge of the formulation of the national policy on information. The ad hoc working group designated by this institution and its task force may be assigned the duty of preparing the working documents, deciding on the dates and duration of the meeting, selecting the participants and working the necessary provisions for the physical facilities needed for such a meeting.

4.2 **The very first task of the task force is to agree on the nature and size of** the consultation meeting and to prepare a workplan accordingly. At this time they may also decide whether they wish to take advantage of similar experiences in other countries and invite outside consultants to participate.

Two possibilities could be considered:

- a seminar with a restricted number of participants, (approximately 30) who will be selected among officers senior enough to make or influence policy decisions in their organizations. This is a workable size meeting, from which one should be able to secure concrete proposals. It also has the advantage of reducing the costs. Most of the countries followed this procedure;

- a much larger meeting, from 70 to 100 participants or even more, which will gather not only leading experts, but also many other officers whose work is in the field of information. This type of national conference has the advantage of sensitizing the overall national information workforce to the advantages of formulating a national policy for their trade. Nevertheless, such a forum is not very suitable for preparing a concrete plan of action and very often a smaller seminar will be needed afterwards. In addition, the expenses will be much higher and cost benefit not so evident. Some countries, however, preferred this approach as it gives a better press coverage and permits to "clear the field" before engaging into the real matter of formulating the policy.

The present methodology proposes the first approach.

4.3 **The next task of the task force is to prepare the working documents**

including an agenda. The latter should be based on the issues to be discussed and provide time for an in-depth discussion and a drafting of proposals. The normal sequence will be (see also Annex F):

(a) overall discussion on general aspects of the information policy and constitution of working groups;

(b) in-depth discussion of issues in smaller size groups;

(c) overall discussion of reports presented by the chairmen of each group and consolidation of their results;

(d) overall discussion on the strategy to be used for the adoption of the seminar outcome by national authorities.

4.4 **Then the task force is to send out invitations to potential participants.**

4.5 **All of the above will require some, although often limited, fund** provisions. It is therefore important for the task force to first estimate the financial implications and investigate the fund-raising possibilities before launching the national consultation. Expenses may be largely reduced if some institution accepts to lend its premises and facilities for holding the meeting. If funds cannot be found from national sources, it may be necessary to call upon international organizations for aid. This is often the case for the developing countries with limited cash flow.

B.2 **Consultation through interviews** (12, 16)

It is possible to collect opinions and ideas about national policy on information from the key national institutions and experts by carrying out personal interviews. This form of consultation which requires competent interviewers has three major advantages:

- it takes less time from national experts;
- it allows a deeper and more precise investigation of the opinions or the policy issues involved;
- it leads to comparable data.

It has, however, several disadvantages when compared to the organization of a consultation meeting:

- it is time-consuming for those in charge of the project and requires a substantial amount of financial resources;

- it does not permit an interaction between the various parties concerned;

- it reduces the degree of commitment to the project;

- it puts much heavier responsibility on those in charge of the project;

- it does not allow the reaching of a consensus or agreement on the issues which often results in a necessity to convene a meeting afterwards.

The organization of personal interviews implies:

- the preparation of interview checklists;

- the selection of institutions and individuals to be interviewed;

- the scheduling of interviews.

1. PREPARATION OF INTERVIEW CHECKLISTS

The checklists should not be regarded as questionnaires. They are only means of aiding memory and of structuring interviews so as to obtain information in a coherent manner. They should emphasize aspects directly related to information policy so as to yield information on how the concept, scope and issues of national policy on information are perceived in the country and on ways of formulating such a policy.

The checklists should be based on information collected for the background document especially on information-related policies (see Chapter IV, Section B.3). The issue document (see Chapter V, Section B.2) could also usefully serve for guiding the interviews.

The following information needs to be secured from these interviews:

- facts and perception on existing policies;
- facts and perception on major policy issues;
- facts and perception on policy concept;
- facts and perception on strategies for adopting a national policy on information;
- facts and perception on establishing procedures for making and enforcing national policy on information.

2. SELECTION OF INSTITUTIONS AND INDIVIDUALS

The quality of the information collected from interviews depends a great deal, in addition to the training and skills of interviewers, on the individuals interviewed and the institutions they represent. The selection varies from country to country; nevertheless certain organizations should be interviewed in all countries:

2.1 Institutions

(a) Central planning organization (e.g. Ministry of Planning and Budget);

(b) National and State Information Institutions (e.g. National Library, National Archives, National Documentation Centre, etc.);

(c) Major sectoral documentation units (e.g. information services depending on various ministries such as Industry, Science, Agriculture, Education, Health, etc.);

(d) Major national academic institutions (e.g. universities, national research institutes, etc.);

(e) Major private information services (e.g. depending on private corporations);

(f) Major national professional organizations (e.g. associations, corporations, clubs, user groups, ...);

(g) International research centres;

(h) National focal points of international or regional information systems (e.g. AGRIS, UNEP, PGI, ...).

2.2 Individuals

Representatives from the above institutions who have the vision to perceive information as a national resource and the administrative power to influence the policy-making process of their institutions or at least the decision making regarding the development and operation of the information services of their institutions. These may be directors of documentation centres, national librarians, national archivists, chairmen of associations, chief information officers, etc ... From the central planning organization one should strive to secure support from the highest possible ranked officer; in developing countries the support of a minister is often necessary and essential.

3. SCHEDULING OF INTERVIEWS

The interviews are often conditioned by the time available. They have to be planned so as to cover most, probably all, the institutions listed above. They should be accomplished within a short range of time, no longer than 1–2 months so that the homogeneity of the results can be still relevant at the time of their announcement and circulation.

Interviews carried out over a period of two weeks allow an absolute maximum of twenty half-day interviews. Time must therefore be carefully rationed, especially in the case when an outside expert is called in to assist the country in this work.

The broad schedule should include first an interview with the organization responsible for the project, followed by interviews with the central planning organization and various other institutions and end with a round up interactive session with the organization responsible. Details on this procedure are discussed below.

4. PROCEDURAL ASPECTS

4.1 **The ad hoc working group and its task force set up by the organization** in charge of formulating the national policy on information may be entrusted to organize the interviews. They may carry out the interviews themselves or entrust the work to some national professionals or even, especially in the case of some developing countries, to foreign experts.

4.2 **It is advantageous to have the interviews conducted by 2 persons, rather** than one, in order to blend a variety of views and approaches. The interviewer's main tasks are to:

- become familiar with the background and issue documents and any other relevant information;
- set up a final schedule of interviews;
- conduct the interviews ensuring that the visited organizations and personnalities fully understand the nature and purpose of the project;
- prepare a report to be submitted to the ad hoc working group for further action on it.

4.3 **When the country chooses to use a foreign expert, it is necessary that** it appoints a national liaison officer who has a broad knowledge of information

activities in the country, whose main functions are:

- prepare background material and draft schedule of interviews;
- arrange for the expert's travel and interviews, especially arrange for the expert to be accompanied, as appropriate by local specialists;
- supply the expert with any further background documents as the need arises during the interviews;
- review the expert's conclusions before he/she leaves the country.

4.4 **The following sequence of actions may guide the scheduling of** interviews:

- preparatory meeting of the expert with the ad hoc working group or representatives of the organization in charge of the project;
- meeting with the central planning organization in particular to understand the overall information policy situation in the country and its place in the national development policy and to secure the organization back up for the project;
- interviews with the various sectoral institutions to gather their opinions on the different aspects of future information policy and its implementation;
- interviews with the various professional orgnizations to gather their point of views on the formulation of a national policy on information;
- last meeting with the central planning organization, possibly interactive with some of those who were interviewed in the sectors;
- report preparation and submission to the organization responsible for the project for follow-up action.

B.3 **Consultation by Mail (questionnaire)** (12, 21, 28)

When the institutions to be consulted are widely dispersed in the country, and the manpower and financial resources are not sufficient to cover them by direct interviews we resort to the method of survey by mail.

- The advantages of such a consultation are that its allows to cover a vast geographical area in a rather economical way.

- Its main disadvantage is that the level of commitment of those participating is usually low which makes this type of consultation the least reliable of the three types mentioned earlier; this is particularly true when the consultation by mail is conducted as a one time operation and is not repeated at regular intervals.

Therefore it may be very well to carry out this consultation concurrently with the consultation by interviews as they complement each other.

The methodologies for consulting by mail are well known; they are based on the elaboration of a questionnaire which is dispatched to a number of institutions; the returns are then analyzed for a predetermined purpose -in this case the formulation of national policy on information.

A national consultation by mail to collect professional contributions for the design of a national policy on information requires:

- the setting up of a timetable;
- the designing of a specific questionnaire;
- the identification of those to whom it should be addressed.

1. PREPARATION OF TIMETABLE

Surveying by mail is a long process mainly because the replies are slow to come and often incomplete requiring a second enquiry. Therefore, when plans are made to initiate the formulation of a national policy on information through the use of questionnaires one should anticipate delays of postal and administrative deliveries by allowing a longer period for reply and a later deadline.

The following activities should be included in the timetable:

Preparatory activities:

. the preparation and pretesting of the questionnaire;
. the identification of the respondents (target institutions and individuals);

Conduct of consultation:

. the processing and analysis of returns;
. the circulation of the results to respondents for comments;
. the finalization of the outcome.

2. DESIGN AND TESTING OF QUESTIONNAIRE

The usual procedure involved in the design of questionnaires can be simplified, because at this stage it aims at collecting information for a given project and not for a periodical collection of data. The questionnaire should be field tested with a limited number of institutions and revised afterwards accordingly. Four basic requirements should be met: the questionnaire should be complete, concise, clear and unequivocal (12). A well designed questionnaire by skilled and experienced experts makes the respondents understand immediately what is the information needed, and how it should be given. Lengthy questionnaires over-burden and discourage the respondents. Foreign experts could be sought if local expertise is not sufficient.

It is worthwhile to inform the respondents at the very beginning of the questionnaire, of (a) the importance of information policies for the development of national information resources and services, (b) the aim of the present consultation, (c) what use is to be made of the returns received and (d) possible impacts on the national development. It should also be specified that the questionnaire is to be filled out by all the major information services of the country.

The questions raised should basically cover the same aspects as in the consultation by interviews (see section B.2.(1) in this Chapter). Nevertheless, each question should be followed by a list, as exhaustive as possible of alternatives. These lists should be prepared on the basis of the background documents available. Open ended questions could also be added to elicit the respondents perceptions about the possible solutions.

Examples

- *What is your opinion on the existing national information policies?*
- *What do you consider are the major information policy issues in the country?*
- *What strategy do you consider should be set up for a rapid formulation and adoption of a national policy on information in the country?*
- *What would be the most suitable machinery for making and enforcing a national policy on information:*

  . a National Council?
  . a National Interministerial Committee?
  . a Standing working group?
  . a periodic national conference? etc.

3. IDENTIFICATION OF INSTITUTIONS

The same institutions as in the consultation by interviews may be selected (see section B.2.(2) in the same Chapter). It would be best to cover all information institutions; in practice this is seldom feasible due to the difficulties to cover all of them; in this case a selection of the core institutions must be made. Once the institutions have been selected one proceeds with the identification of individuals to whom the questionnaire will be addressed. The more institutions there are to be covered, the more strain will be exerted on the resources and time available to the organization responsible for the formulation of the national policy on information.

4. PROCEDURAL ASPECTS

4.1 **It is the responsibility of the ad hoc group and its task force to set up** the timetable, prepare the questionnaire and follow up the consultation by mail.

4.2 **Once the questionnaire is prepared and sent out to the selected** respondents, the returns should be followed up closely. The method of consulting by mail is known to be plagued by low response rate. The non-replies should be followed up by sending reminding letter, making telephone calls and direct interviews. The latter two solutions entail supplementary resources. All three help to capture part of the missing information.

4.3 **When the final deadline for reply has passed the ad hoc group and its** task force should proceed with the analysis of the returns and use them as a basis for preparing a draft proposal on the national policy on information and ways and means of implementing it.

4.4 **The draft proposal should then be circulated for comments to the** respondents and finalized on this basis (see Chapter VII).

PHASE II : OFFICIAL APPROVAL OF A NATIONAL POLICY ON INFORMATION

Introduction

Chapter VII : Preparation of the Final Version of the Policy Proposal

Chapter VIII: Submission of the Policy Proposal

Chapter IX : Integration of the Information Policy into the Development Policy

INTRODUCTION

The setting up of a plan of action for the development and management of information resources and services relies on the acceptance of an information policy. The draft proposal formulated during Phase I needs to be presented to, discussed and approved by the appropriate national officials and later embodied into a national legislative text – this is Phase II of the methodology.

This phase of the methodology aims at guiding the country in preparing its strategy for the official approval of a national policy on information. It describes a three-stage procedure (see Figure 6):

- the preparation of the final version of the information policy proposal;
- the submission of the proposal to the most appropriate national authorities;
- the formal inclusion of the proposed policy into a text which could serve as a legal authority for the development of information resources and services.

The adoption of a national policy on information proceeds through several levels of authority: firstly, it needs to be agreed upon by the professionals concerned; secondly, it needs to be accepted by the users; thirdly, it needs to be supported by information managers; and finally, it needs to be approved by policy makers (i.e. often politicians). it is assumed that the proposal is prepared by the professionals and users and therefore is already approved by them at the time when one starts Phase II.

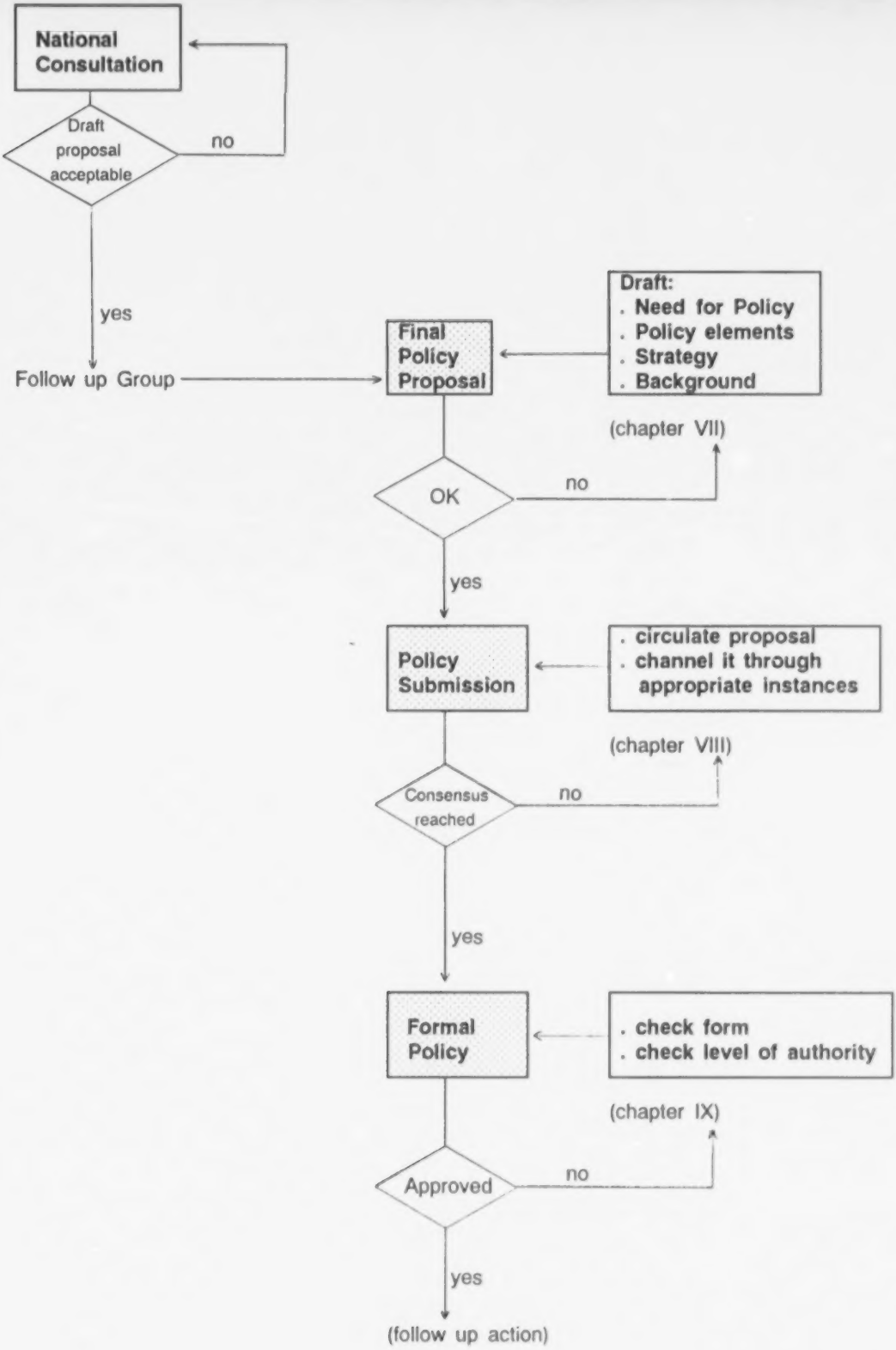

Figure 6: Phase II - Official Approval of a National Policy on Information

CHAPTER VII

PREPARATION OF THE FINAL VERSION OF THE POLICY PROPOSAL

A – Objectives

B – Presentation of the final version

C – Procedural aspects

CHAPTER VII

PREPARATION OF THE FINAL VERSION OF THE POLICY PROPOSAL

A - OBJECTIVES

The preparation of the final version of the policy proposal is needed:

- for the drafting of a legal text to be presented for official approval;
- for providing easy reference to the issues comprising the proposed policy;
- for giving an idea of the implications for their implementation, both in terms of actions to be undertaken and resources required.

The expected output is a clearly drafted, relatively short document, but a document that provides accurate and up-to-date information on the issues which demand to be looked after at the governmental level.

B - PRESENTATION OF THE FINAL VERSION

Normally, the outcome of the national consultation (national meeting, personal interviews, by mail) needs to be analyzed to select the essential problems of concern to the national information community. The rich information collected from the surveys and reviewed through the consultation cannot be presented as raw data. An appropriate format, which underscores the main elements which one wants the decision makers to know, should be adopted. It could include the following:

- the formulation of arguments in support of the proposal for a national policy on information (survey results);
- the description of the work done so far at the national level (consultation proceedings);

- the content of the proposal (issues and recommendations).

Example

FINAL PROPOSAL FOR A NATIONAL POLICY ON INFORMATION

Introduction:

(The objectives of the document, how it was prepared and by whom).

Definitions: (1 page)

(The description of the main terms e.g. information, policy, information policy, information infrastructure, ...)

Need for a National Policy on Information: (1 page)

(Elements to be extracted from the introduction to Chapter II and the basis of the information collected in the background document in Chapter IV)

Suggested Elements for a National Policy on Information: (approximately 15 pages):

(Basically a short version of the document describing the policy issues (see Chapter V); includes statements for each issue with first steps for their implementation)

Suggested Strategy for the Implementation and Operation of the National Policy on Information: (2-4 pages)

(Proposed plan of action for achieving a practical national policy on information: this aspect is further developed under Chapter XI)

Background documentation on national information resources and services:

(Optional in an annex)

C - PROCEDURAL ASPECTS

C.1 **As suggested earlier (see under Phase I, Chapter VI), the ad hoc working** group and its task force set up for convening the national consultation, could also be assigned the preparation of the final version of the results of this consultation. It should be noted, however, that in the case when the consultation is conducted by way of organizing a national meeting, the latter often designates a group of

people who would follow up the implementation of its recommendations. It may be either the same personalities as in the ad hoc working group or it may not be.

C.2 **In both cases, it is important that all those entrusted to finalize the results** of the consultation, be fully recognized by the others as their best representatives; this is the reason why it is suggested, under Phase I Chapter VI, to include on the agenda of the meeting (or the workplan if the consultation is held through interviews or mail) the task of setting up a follow-up group.

C.3 **In finalizing the document full account should be taken of the preliminary** documents (Chapter V) prepared for the consultation and the observations collected from such a consultation (Chapter VI).

C.4 **One should also keep in mind that the final version of the policy proposal** serves as the basis for drafting the formal text legalizing the development of information resources and services in the country; it should be clear and persuasive to the legislators, and reproduced in an attractive format.

C.5 **One should also note that a possible alternative is to prepare the preliminary** documents in the form of the final proposal before conducting the consultation and collect the commentaries; this procedure has two advantages: it facilitates the consultations and produces direct results.

CHAPTER VIII

SUBMISSION OF THE FINAL POLICY PROPOSAL

A – Objectives

B – Organizational Aspects

B.1 Time Factor

B.2 Human Factor

C – Procedural aspects

CHAPTER VIII

SUBMISSION OF THE FINAL POLICY PROPOSAL

A - OBJECTIVES

The preparation of the final version of the policy proposal is mainly the work of the information professionals concerned, i.e. the proposal is a production on which they reached agreement. The principal purpose of submitting the proposal to the appropriate government authorities is to secure their support and possible assistance in presenting the proposal for official approval. In practice it means:

- circulating the final proposal to a selected number of institutions/individuals in public and private sectors for their comments;

- selecting the most suitable government body (Ministry, National Institution, National Council, ...) for introducing the proposal in the government;

- channelling the proposal through appropriate legislative bodies.

The expected outcome of these actions is the largest possible governmental consensus for the adoption of a legal text stating the national position on matters of concern to the development and management of information resources and services. Success will depend to a large extent on the selection of the government body which will be responsible for introducing the proposal in the government.

B - ORGANIZATIONAL ASPECTS

It is at the stage of presenting the policy proposal that the two major factors -time and human resources - play their full role (see Chapter III).

B.1 The **time factor**, as already noted, intervenes in two ways. A sufficiently-long period of time needs to be foreseen to achieve the policy. The length of time shall

depend on the progress already made in the formulation of the policy, on the state of this policy, and on the local circumstances in general. For instance, countries which started from the first step, spent an average of one to two years to achieve concrete results at the national level. Policy making at the sectoral level, and especially at the institutional or local levels may take a shorter period. Corporations tend to act more rapidly as their concern is limited to their own interests.

Secondly, it is essential to pick up the period which is the most favorable for the endorsement of new policies by the government, e.g. when a new national plan is being prepared, when the constitution is revised, or when a new government is formed, particularly when it becomes more open to the promotion of information activities. No need to say that the right time selection becomes essential in countries where government and administration change frequently. Surveys have shown that many countries failed to achieve a policy either because they did not allow enough time for this formulation or did not foresee the change of government, and therefore the change of attitude of a new administration especially with regard to actions taken by their predecessors.

B.2 The **human factor**, suggests that the approval of any policy is made easier if it is endorsed beforehand by a number of senior government officials. The latter should preferably be:

- representatives of ministries or government institutions which are likely to have the greatest interest for the adoption of a policy which will ensure the development and management of information resources and services (i.e. Ministry of Planning and Financing; Ministry of Science and Technology; Ministry of Information; Ministry of Education or Culture; ...); the selection varies with each country, nevertheless the representation of the Ministry of Planning and Financing and the representation of the Executive Branch (i.e. Cabinet) provide a definite asset for the adoption of a policy;

- senior officers as high-ranking as possible who have a power to influence the policy-making process in their institution or country;

- knowledgeable about the mechanisms for formalizing policies in their respective institution or at the national level;

- as active as possible in the promotion of the access to knowledge through development and management of information resources and services.

One should, however, stress that the success of the policy formulation and implementation depends in the first place on the composition and motivation of the team of senior information specialists whose daily task is to work in the fields of information.

It is not always certain that those who are selected to participate in this activity are willing to do it. Efforts need to be made to motivate people to get actively involved,

to widely publicize the necessities for having a national policy on information and to provide benefits for these participants.

In developing countries it is particularly important to have officials from the state government to be involved because they are often the only ones who can influence the final adoption of the policy. The participation of the international information community serves as another leverage in mobilizing the human resources and attracting the attention of governments to the subject matter.

The above-mentioned officers are consulted for their support to the policy proposal but also for their perception of the most suitable national organization for leading this proposal through approval by the government authorities.

The identification of a leading agency, institution or ministry is not always an easy matter:

- In some cases the choice is evident because there is already an existing body whose functions include the supervision, coordination or planning of information activities, e.g. National Council on Information, a National Library Service, etc...;

- In other cases the identification will have to be made among those agencies which are most concerned with the development of national information resources i.e. Ministry of Information, Ministry of Culture, Ministry of Science and Technology, Ministry of Commerce, Ministry of Cabinet Affairs, etc. or any specific national institution such as a National Documentation Centre or the National Library; the difficulty in this designation resides in the extent to which the given ministry or agency has a mandate to play a leading role in presenting the draft policy to the governmental bodies for adoption. If the selection cannot be made at this early stage, a decision should be taken for a temporary designation of an institution which will initiate the work; the final decision could be deferred until a national consultation is held on the matter.

- In still other cases, countries, considering they do not have a relevant body to carry out the work, may decide to establish first such a body and defer their formulation of a national policy until that time; for instance, some countries created a National Library Service or a National Documentation Centre, or a governmental committee with representation from each Ministry, or a National Council on Information, etc. (42, 43, 54) (see under Chapter X the possible structure and functions of such an agency).

- In all cases it is advisable that the responsibility be entrusted to an organization or an institution which has a power of drafting and presenting legislations for adoption by the government; it is through this organization/institution also that the country will seek, if the need arises, cooperation and assistance from international, intergovernmental, multilateral or bilateral organizations.

- The leading institution has, as its first task, the submission of the proposal to the decision makers for adoption. To do so it needs first to ensure that the proposal

presented by the information specialists (outcome of the national consultation) and eventually supported by some government personalities is drafted in a format required for presenting it to the legislators. Help may be required here from officers experienced in introducing such texts in the government.

- The identification of who should introduce the proposal and to whom is again an aspect specific to each country. Sometimes the Minister whose ministry was responsible for drafting the text will make the proposal at the interministerial meeting; sometimes a Cabinet Member will be in charge of presenting it; sometimes the text will have to be introduced to a legislative body such as a Chamber of Deputies, etc...; at some other times a Board of Directors may be in charge of doing it. As it can be seen there are as many variations as there are administrative and political structures.

C - PROCEDURAL ASPECTS

The group that is assigned to follow up on the approval of the policy may again look after all the steps mentioned under B above.

C.1 **select the period most favorable for presenting the new policy to government** for endorsement;

C.2 **consult a selected number of high-ranking officials**;

C.3 **ascertain the leadership of an institution for introducing the proposal into the** government;

C.4 **ensure the drafting of the text to be introduced**;

C.5 **ensure that the proposal is being channelled through the different instances** and if needed shorten the delays by providing the complementary information required.

CHAPTER IX

INTEGRATION OF THE INFORMATION POLICY INTO THE DEVELOPMENT POLICY

A – Objectives

B – Characteristics

B.1 Form of the policy

B.2 Level of authority

C – Procedural aspects

CHAPTER IX

INTEGRATION OF THE INFORMATION POLICY INTO THE DEVELOPMENT POLICY

A - OBJECTIVES

The integration of an information policy statement into the national development policy has several objectives:

- to link the national information strategy to the overall development policy of the country;
- to define the place of information resources and services (in public institutions of different sectors of development and in private corporations) in the national development activities;
- to provide official guidance to government agencies and private corporations for the planning and management of information resources and services;
- to ensure that the need for developing information resources is taken into account in all policy making and planning processes;
- to establish a basis for any future reviewing of the policy according to the changing circumstances;
- to highlight the influence of other interrelating policies on the information policy.

It is expected that the integration of an information policy into the national development policy will result in a wider acceptance of the strategic significance of information services and their managerial implications for businesses and national economies. The endorsement of an information policy by policy makers can be taken as a reasonable guarantee of commitment and of getting resources.

B - CHARACTERISTICS

Two predominant factors in the successful integration of an information policy in the decision-making process of a country are (a) the form in which the policy is presented and (b) the level of authority which is assigned to do it. Both will depend on the political, economic and administrative structures of the country.

B.1 Form of the policy

There is no unique form in presenting an information policy. As in the case of other areas of development two types of decisions will have to be made in designing the form.

- first the country will choose the form which is likely to have the greatest impact on the process of planning information activities; it may come as a constitutional law, common law, statutory control, enacted statutes, national agreements or guidelines, decrees or many other forms;

- secondly the country will decide whether the policy should be an integral part of a wider sectoral policy or whether it should stand as a policy on its own right.

Whatever the choice, in view of the rapid changes that are currently taking place in the field of information the policy should be incorporated in a way that would allow easy amendments.

B.2 Level of authority

The field of information being intersectoral, the information policy will need to be placed under the authority best suited to deal with the national planning, programming and management of information activities. It should be noted that in most countries there will be no single ministry which could do it; the best solution will then be to place this authority at the highest level. The choice is usually influenced by three decisive indicators:

- the organizational structure of the government indicates the administrative unit(s) most closely concerned with information activities (see B.1, Chapter IV);

- the nature and scope of information indicate the authority(ies) (ministry, ...) most relevant to this type of information (see B.2 in Chapter IV);

- the relationship with other similar policies indicates the institutions most likely to claim the responsibility (see B.3, Chapter IV) and ensure an atmosphere of general acceptance.

The selection of the level of authority determines the place the information policy will be given in the government decision- making process. For instance, in the case of STI, the Ministry of Science and Technology is likely to see the STI policy as part of a broader policy on science and technology, while the Ministry of Information may want to link it more closely to policies on mass media, or the Ministry of Planning may wish it to be as a separate policy because it cuts across many sectors of development.

C - PROCEDURAL ASPECTS

The integration of an information policy into the basic decision-making and problem-solving processes for national development is at this stage in the hands of the government. The latter will take two basic decisions: whether the proposal is acceptable in substance and what prominence should be given to it. Both will be influenced by the solidity of arguments provided in support to the information policy.

a) The following factors will facilitate its acceptability:

- the proof of the need for it;
- the proof of its degree of priority in view of other priorities;
- the description of the resource requirements for it;
- the level of support for it from different institutions.

Collecting information and lobbying for the support is the work of the leading agency (see B.2 above) which introduces the policy text for official approval).

b) The following will enhance the degree of importance given to it:

- whether the proposal covers only one specific field or has also an impact on other fields of interest;
- whether the proposal aims at encompassing the other existing policies or be only part of them;
- whether the proposal concerns national interests or only one given sector.

PHASE III: IMPLEMENTATION OF A NATIONAL POLICY ON INFORMATION

Introduction

Chapter X : Establishment of a Coordination Mechanism

Chapter XI : Development of a Plan of Action

Chapter XII : Financial Aspects of the Implementation

Chapter XIII: Operation and Evaluation of the Information Policy

INTRODUCTION

Once adopted the national policy on information needs to be implemented. This requires planning which includes:

- the selection of suitable strategies to achieve the various objectives of the policy within a given period of time;
- the assignment of priorities to the various policy issues;
- the allocation of resources for the implementation of related programmes.

Phase III deals with all these aspects; it emphasizes that the tasks to be carried out are facilitated by the establishment of a permanent planning mechanism. The concept outlined in Chapter II provides the basis for the proposed procedure of a gradual creation of a permanent planning process; the procedures include the following major steps (8) (see figure 7):

- the establishment of a mechanism for the planning of information activities;
- the development of a plan of action for the achievement of the policy goals;
- the provision of financial resources for the implementation of information activities;
- the design of measures aimed at periodic assessments and adjustments of the plan of action.

The implementation of a national policy on information is the most important step in the information policy-making process; that it operates in a reverse way from the process of formulating the policy (see Phase I). The policy makers provide the general trends and objectives; these need to be translated into programmes by the senior managers in the field of information and implemented by information professionals in the form of projects.

Information professionals and senior managers are easily identifiable; the information policy makers however do not always represent an existing, well-defined group. Hence, the policy-implementation process often starts with the creation of such group which later becomes the core of the permanent policy-making mechanism.

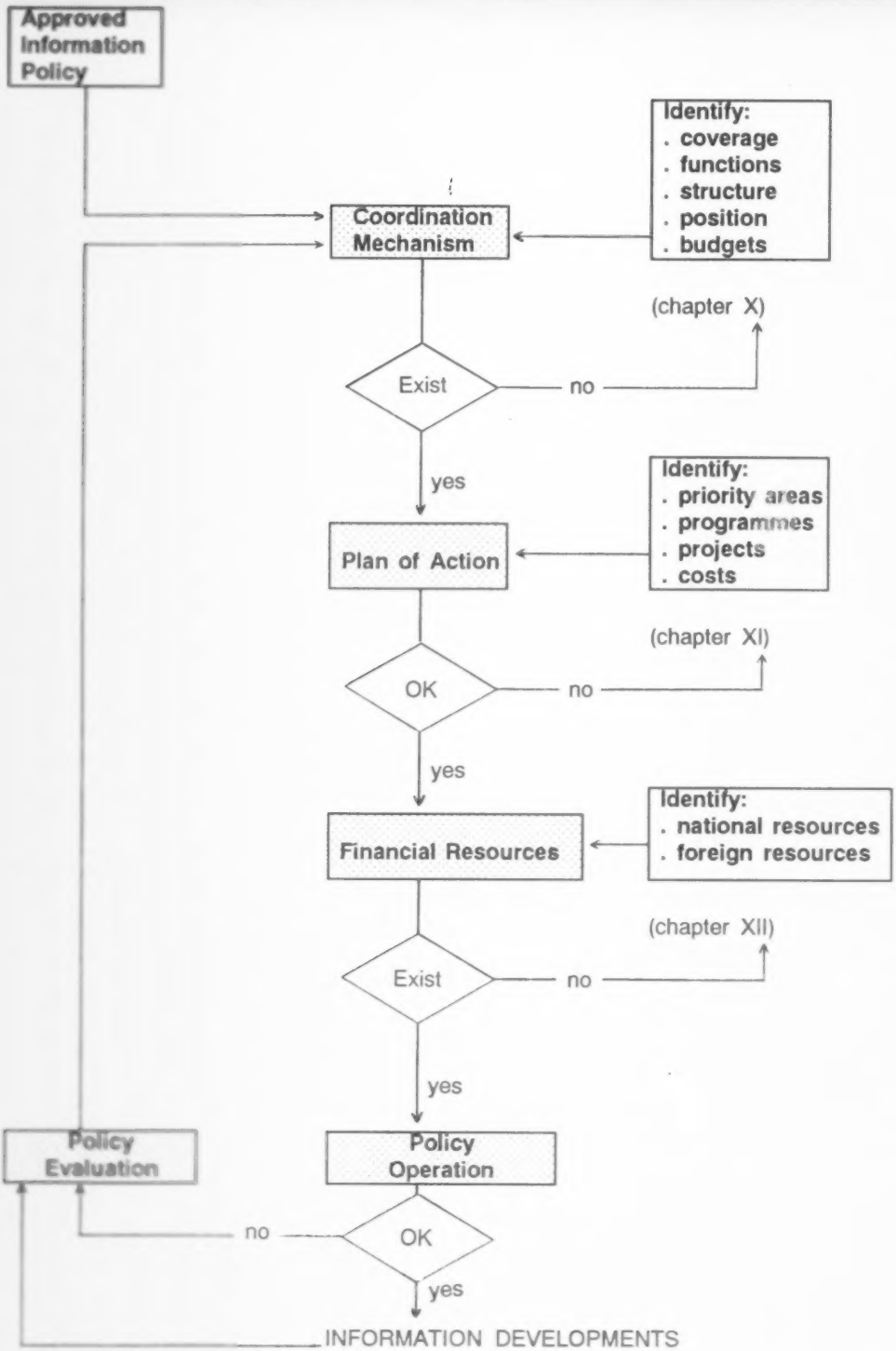

Figure 7: Phase III – Implementation of a National Policy on Information

CHAPTER X

ESTABLISHMENT OF A COORDINATION MECHANISM

A – Objectives

B – Organizational Aspects

B.1 Coverage

B.2 Functions

B.3 Structure

B.4 Position in the government structure

B.5 Budget

C – Procedural aspects

CHAPTER X

ESTABLISHMENT OF A COORDINATION MECHANISM

A - OBJECTIVES

The development of national information resources and services consists of a simultaneous operation of a large number and a variety of broadly dispersed information programmes and activities. Their planning and harmonization usually necessitates the setting up of a coordination procedure which will facilitate and stimulate voluntary cooperation, i.e. a permanent National Information Coordination Mechanism.

This chapter gives suggestions on how to create such a mechanism and what should be its coverage, functions, structure and position in the government (see Figure 9).

B - ORGANIZATIONAL ASPECTS

B.1 Coverage

The National Information Coordination Mechanism will deal with all matters at the national level related to:

- information and data in textual, numerical and graphical forms, recorded in conventional and non-conventional media;

- information and data sources, systems, networks and services of different types including data banks, data bases, library systems and services, documentation centres and services, information clearing facilities, referral centres and services, information analysis, consolidation and repackaging centres and services;

- the information industry, including the development of information software and hardware;

- information and data handling in both manual and mechanized ways, especially through the application of modern technology.

These matters would cover in particular:

1. the aspects of concern to the development and transfer of national information technologies;

2. the aspects of concern to the information resource management;

3. the aspects of concern to the dissemination, transfer and marketing of information.

B.2 **Functions** (2, 8)

The National Information Coordination Mechanism will ensure three major functions (fig. 8):

2.1 **a policy and decision-making function** i.e. the adoption of the national information policy(ies) and plans on the basis of periodic reviews, assessments and of implementation reports from the executive branch; it includes:

(a) ensuring that the national policy on information is integrated into the national development policy, and information strategies are supportive of the national development plan;

(b) allocating responsibilities to different institutions and organizations in the country with due regard to building and sharing of information resources and services (creating data bases, developing information manpower, setting up and interconnecting information and data systems, etc...);

(c) adopting legislative and administrative procedures to secure inputs of human, financial and physical resources for the development and management of national information resources and services.

2.2 an **executive function** i.e on one hand the implementation of the policy and plans approved by the government, which includes:

(a) disseminating information on national information policies and plans and their implications;

(b) ensuring the implementation of programmes and activities in support to the policy and plan of action of the country through the preparation and dissemination of guidelines, criteria and standards;

(c) ensuring cost effectiveness of information activities by supporting measures to improve coordination of the development and management of information resources among the various national institutions;

(d) encouraging education, training and research for the advancement of information resources and services and dissemination of relevant results.

On the other hand the elaboration of policy changes and plan of action proposals on the basis of technical advice received from the information institutions; this includes (22):

(a) assessing resources of the various components of the national information services, such as sectoral information systems and specialized subnetworks;

(b) assessing cost effectiveness, usefulness and impact of such components on the national development;

(c) preparing regulatory, legislative and administrative mechanisms on information accessibility, flow and provision, cooperative arrangements and resource sharing, and information industry and market;

(d) supporting cooperation programmes with regional and international information institutions.

2.3 an **advisory function** i.e. the provision of specialized expertise on information requirements and on ways and means of fulfilling them; it includes:

(a) providing data on the various activities and physical and human resources available for the development and operation of information services;

(b) providing data on costs and benefits of information activities (information marketing);

(c) identifying the needs for information resources and services in the priority areas of the national economy;

(d) recommending information programmes and projects, and measures for correcting information deficiencies.

B.3 **Structure** (2, 8)

3.1 The policy and decision-making function will be entrusted to an **interministerial group**, under the chairmanship of the highest-ranked officer (i.e. Prime Minister or his representative). It should be composed of ministerial level representations from the relevant public or private sectors and services (education, science and technology, finance and planning, industry, communication, mass-media, labour, statistics, culture ...). It should meet at least twice a year to review the activities of the National Information Coordination Mechanism.

3.2 The operational function could, if deemed necessary, be entrusted to an appropriate **executive body**; in this case it becomes the executive arm of the National Information Coordination Mechanism which provides a general framework for competitive developments in the field of information and facilitates the harmonization and coordination of information activities where it is most profitable. Such a body could be then composed of an Executive Director of the rank and status of Secretary to Government, supported by competent professional staff and appropriate administrative and secretarial services. Sometimes, particularly in countries where the information industry is well developed and where competition among various information systems and services is highly acute, the establishment of such a body is difficult.

3.3 The advisory function will be entrusted to an **advisory committee**, a technical body; it will be composed of 12 to 15 persons who are top-level experts in different areas of information and data handling and representatives of information user groups (academic and professional organizations) and the information industry.

B.4 **Position in the government structure** (2, 8)

The National Information Coordination Mechanism should be under the authority of the highest possible administrative institution e.g. the Prime Minister's Cabinet. The executive body (i.e. Executive Director and the secretariat) in one of the ministries.

The experts on the advisory committee are convened by the Executive Director and come from the major information institutions of the country.

This multilateral position encourages the National Information Coordination Mechanism to maintain close contacts with all the national sources of information and the sectoral "focal points" established in the country by international organizations. Officers from the coordination mechanism could also be considered

to represent the country on intergovernmental conferences dealing with information matters, such as Unesco and its General Information Programme (PGI).

B.5 **Budget** (8)

A budget will have to be assigned for the administrative costs (secretariat, supplies, offices, ...) involved in the operation of the National Information Coordination Mechanism; this does not imply a new structure but rather additional functions requiring supplementary funds. In the elaboration of the budget one must make a distinction between internal expenditures and delegated (contracts) expenditures, as well as between national and foreign sources of financing.

The sources of these funds will need to be identified from the outset on the basis of accurate estimates. Sums could either be allocated for instance as a separate line of expenditure during the budgetary exercise or be contributed from the budgets of the different development sectors.

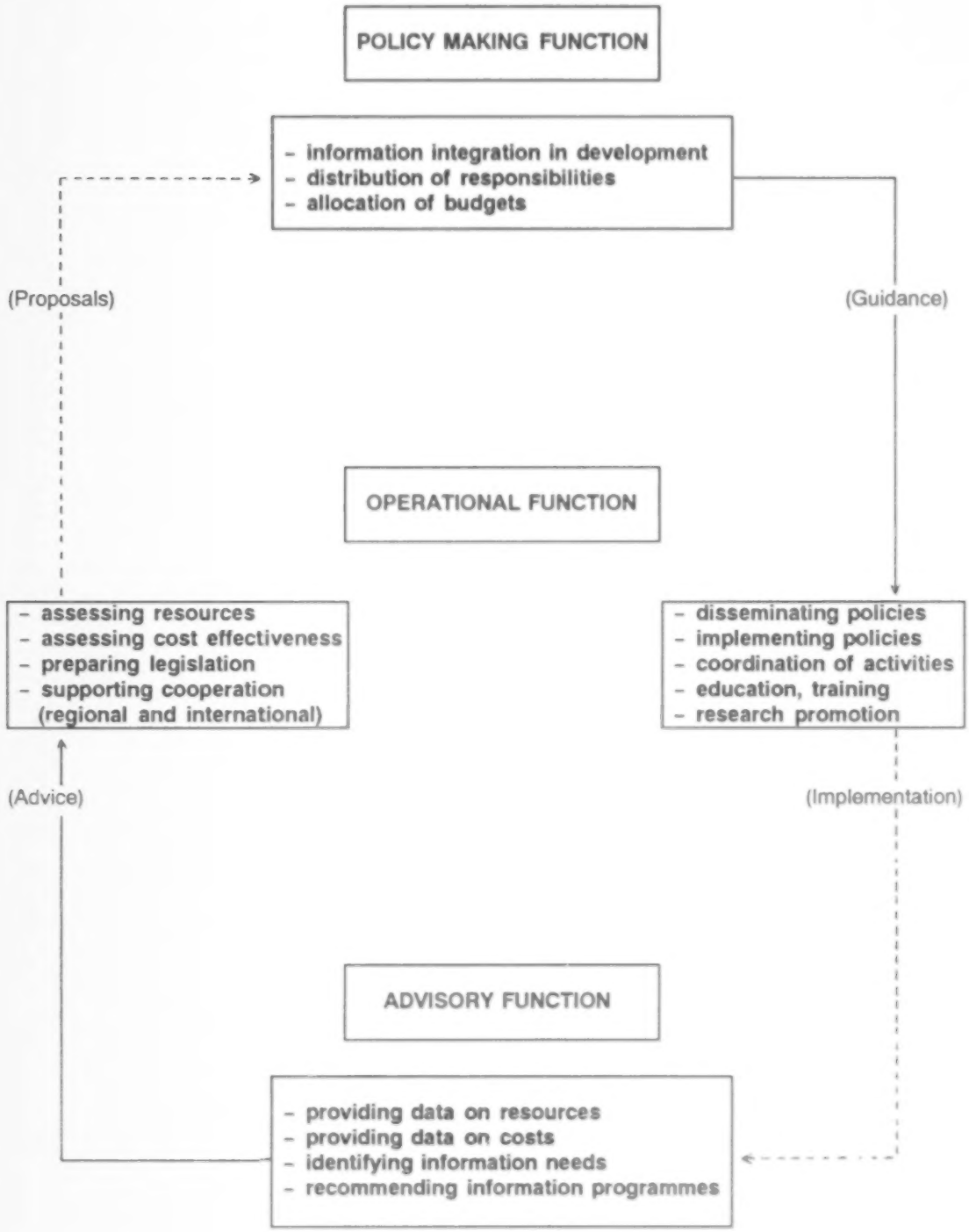

Figure 8: Functions of a National Information Coordination Mechanism

C - PROCEDURAL ASPECTS

The creation of the permanent National Information Coordination Mechanism includes:

C.1 **the establishment of an interministerial group where all the ministries will be** represented as all of them have information activities; nevertheless particular care should be taken to have the ministry of planning and financing as an active member of the group. Cabinet should head this group as is the case for the other similar interministerial groups.

C.2 **the setting up as the case may be of the executive body i.e. the nomination of** an Executive Director and the establishment of the Exécutive Secretariat:

- the Executive Director as a chief officer should have a high status in the administrative and professional hierarchy and have the same rank as that of the members of other policy-making committees; he should report to the interministerial group or the Chairman of the responsible commission;

- the Secretariat staff should be chosen from the widest possible range of candidates with intellectual and administrative ability and motivations; there is an advantage of having one fully-trained information specialist; for the rest of the staff experience in information work will be helpful but not a prerequisite for recruitment as the Secretariat will delegate work to other organizations through the advisory committee.

  Some countries do not see the need for setting up such a body; in this case the executive function is often assigned to the interministerial group who decides or not to establish a Secretariat to this end.

C.3 **the nomination of an advisory committee composed of representatives from** sectoral information services, from permanent or ad hoc committees dealing with local, regional or international information services and from users associations.

C.4 **the definition of the functions of each of these groups**.

C.5 **the preparation of the programmes and budgets indicating the priority** activities on which efforts are to be concentrated and the periodicity and timetable of the work to be performed during a prescribed period of time.

CHAPTER XI

DEVELOPMENT OF A PLAN OF ACTION

A – Objectives

B – Content

C – Procedural aspects

C.1 Selection of priority areas

C.2 Selection of programmes

C.3 Selection of projects

C.4 Resources and cost estimates

CHAPTER XI

DEVELOPMENT OF A PLAN OF ACTION

A - OBJECTIVES

An information plan of action serves as a "backbone" along which the various information programmes and projects are arranged like "building blocks" in a logical order according to policy priorities. Drafting this plan of action aims at:

- the assignment of priority areas in accordance with the national development plans;
- the design of programmes in response to these priority areas;
- the selection of projects making up the programmes;
- the estimation of resources and costs for the implementation and operation of these projects.

The plan of action is expected to implement the strategies derived from the policies for the development of national information resources and services as an integral part of the national development plan. Its main purpose is to provide consistency and cost benefit advantages in the implementation of the policy and operation of the plan.

B - CONTENT

A plan of action for the development of national information services normally covers three major domains of information activities:

- the information activities in the public sector;

- the information activities in the private sector;

- the information activities in the international environment.

So far information activities in these three domains have not been planned. Indeed, some people believe that many important activities can be undertaken in the absence of an all-embracing plan because the information environment is changing too rapidly and planning will only delay this development. This may be true in a short term; nevertheless, it is necessary that the evolution of information activities be synchronized across the institutional and departmental boundaries within the country, that all changes be known to all and that the various information institutions be able to see how and where progress is being achieved in the development of the overall national information potential. This requires planning.

It should also be emphasized that planning, as in the case of information policy-making, is a continuous process which cannot be finalized in a given period of time - one plan of action initiates another plan, because changes are brought about as a result of the first plan.

Example:

Issue 1 :	*Shortage of qualified manpower*
Policy 1 :	*Encourage development of manpower resources*
Strategy 1 :	*Establish educational institutions*
Plan of Action 1:	*Priorities and timetables for the execution of strategy 1; includes a set of* ***programmes*** *(upgrade existing schools; establish new facilities; set up exchange programmes ...)*
Programmes :	*Composed of a set of* ***projects*** *(purchase of equipment for schools; training of teachers; design of curricula; ...)*
Projects :	*Composed of a number of specific* ***activities*** *(consultancies; fellowships; publications).*

C - PROCEDURAL ASPECTS

The planning process takes place at local (corporations, institutions) and national (government) levels of management, and interacts with decisions taken at the international level (transborder). It follows the same pattern in all three cases: selection of priority areas, selection of programmes, selection of projects, cost estimates.

C.1 Selection of priority areas

The areas of priority in the development of information resources and services are selected from among the policy issues identified as the most important ones, such as the issues listed earlier under Chapter V and Annex C. Those will of course vary according to the level of management the planning is for. Information priority areas in corporations for which the main concern is profit making may be quite different from the priority areas of the public sectors whose task is to serve the population at large or from the priorities of the international agencies who strive to promote the exchange of information to the largest possible extent.

C.2 Selection of programmes

Each priority area needs to be translated into programmes. These can be numerous and varied as shown in Chapter V and Annex C; their formulation and identification need most careful attention as they are the actual actions taken towards the implementation of the policy.

C.3 Selection of projects

Each programme is normally composed of many projects which themselves may include numerous activities. The choice of these projects and their good preparation will eventually determine the quality of the information programme and subsequently the impact of the information policy itself.

C.4 Resources and cost estimates

The cost of implementing a policy is an essential indicator for the decision makers and administrators. These resources and cost depend on a number of factors and in particular on the number and size of the projects proposed. Thus each project proposal for information activities should be accompanied by a statement of the estimated expenditure and, where appropriate, income (8). Professional skill is needed to arrive to proper costing estimates; the costing should depend on the length of the period over which the project will take place and will include costs of each activity (personnel needed, purchase of equipment, ...) of the given project.

Some countries may find it difficult to choose the proper costing procedure, because information on the average cost of the different information handling procedures (acquiring, storing, processing, ...) is fragmented, scattered and very variable. The optimum approach is to apply cost rates published in specialized literature; if such recent literature is unavailable, which is often the case in developing countries, use

the figures applied in other fields (education, agriculture, ...) and seek assistance from relevant administrations.

The costing procedure should also conform to relevant guidelines of the government.

The process of estimating the resources and cost illustrated in Figure 9 is designed for budgeting the projects submitted to the General Information Programme of Unesco.

Country(ies)

.....

.....

BUDGET ESTIMATES FOR THE PROJECT
(in US dollars)

	NATIONAL INPUT: CONTRIBUTION FROM HOST COUNTRY				**INTERNATIONAL INPUT: REQUIRED CONTRIBUTION FROM COMPLEMENTARY RESOURCES**				
	1st year	2nd year	3rd year	Sub-total	1st year	2nd year	3rd year	Sub-total	**TOTALS**
Personnel:									
Experts/Consultants									
Administrative support									
Travel									
Training:									
Fellowships/ Study grants									
Group Training									
Equipment:									
Expendable									
Non expendable									
Premises									
Miscellaneous:									
Total 1st year									
Total 2nd year									
Total 3rd year									
TOTAL									

Fig 9: Example of a Budgeting Sheet for an Information Plan of Action

CHAPTER XII

FINANCIAL ASPECTS OF THE IMPLEMENTATION

A – Objectives

B – Characteristics

C – Procedural aspects

CHAPTER XII

FINANCIAL ASPECTS OF THE IMPLEMENTATION

A - OBJECTIVES

An important prerequisite for the operation and implementation of an information policy is the provision of financial resources for the national information programmes. This chapter gives some guidance on where to look for the necessary funds and how to tap them. It covers:

- the identification of the principal funding sources which are likely to support such programmes, especially in developing countries, and
- the description of basic conditions which need to be met to obtain such financial support.

B - CHARACTERISTICS

Although the provision of financial resources is generally expected to occur in the final stage of implementation, planning for the provision must start as early as the planning for policy formulation itself. Identifying and obtaining funding is a gradual and cumulative process that requires a political as well as an economic understanding of the workings of the public and private bureaucracies. Often it is not the absence of funding sources that is the main obstacle to the development of information resources and services, but the difficulty to commit the government or any other potential domestic or international funding source to allocate money for the improvement of national capacities to provide information (8). Financial support is usually allocated on the basis of how convincing funding requests are in terms of both political and financial returns. Whatever innovation is proposed, it must make sense to the sources of support.

The ultimate success of raising revenues for the implementation and operation of the

information policy depends on the

- Awareness of the relationship between the national development plan and the national budget as well as the budget cycle of the country.

- Ability to demonstrate that the information policy formulation and implementation process has been managed effectively and efficiently.

- Ability to justify the value of information resources and services to national development.

- Knowledge of techniques for assessing the impact of information services (often on a pilot project basis) on the users.

- Communication skills in proposing the funding needs in effective written, and, if necessary, oral forms.

Funds are needed for two purposes:

1. The actual implementation of the policy, i.e. the financing of the various information programmes in two different ways:

   - *funds for capital investment* (i.e. in information infrastructure or technology) usually representing a one-time financing which may be expected to lead to benefits in the future;

   - *funds for recurrent costs* to ensure sustained operation of a programme or service; these funds will have to be renewed regularly during the life of the programme or service (i.e. staff salaries, facility maintenance, equipment repair).

2. The ongoing operation, review and revision of the policy i.e. the budgeting by a coordinating organization which will ensure that the policy is properly implemented, enforced and which will adapt the policy to the socio-economic changes of its environment (See Chapter X).

Funds for implementation are first sought from national sources; external financial support may be searched for to complement the national input (83–106).

National Funding Sources

Four types of sources have been recognized as potentially useful: (a) government, (b) private sector enterprises, (c) private sector nonprofit institutions, and (d) revenues from information products and services.

It is important to note that these sources are very different in their levels of potentiality, the first being the most likely funder and the fourth being the most difficult goal to achieve.

1. **Government**

National planning systems vary and in each country their mode of operation has direct importance for the implementation of any policy. One may identify at least two stages in national planning: (a) broad goal setting and (b) the conversion of goals into specific strategies.

Part of national planning is the formulation of the national budget cycle. All nations have a budgeting process used in the allocation of resources among competing needs. Familiarity with the country's budget cycle is essential for the successful requisition of public funding. The budget is a key political document and a certain pattern of allocations over at least a few years is usually evident.

The budgeting for information activities can be either decentralized among the ministries or controlled by a central planning institution. In the first case, each information programme has to compete with other programmes of the ministry to which is pertains. In the second case, it is likely that a general information budget will be centrally established and each ministry will have to justify its share of this sum. Not only the government units directly involved in the support of information institutions such as the ministries of education, culture or information will share this central budget but also ministries active in research and development such as the ministries of health, defense, agriculture, commerce, etc., which are often engaged in information and data gathering programmes. In any case, those responsible for the implementation of the national information policy should be cognizant of the main issues involved in national budgeting such as pricing policies, the relation of the budget to the development plan, and the political forces behind the process.

Many countries today tend to seek increased interaction between the government and the forces of the market in order to strengthen the economy. The intensity of marketing goods and services by public enterprises varies from country to country depending on how centralized or market-oriented the country's economy is. In some countries, government budgets are supplemented by revenues from the sales of government information products and services. There is evidence that the charging of fees for public services is sometimes questioned and that the recycling of benefits from such sales into the improvement of information activities is not usually done. However, public enterprises should not be ignored as potential funding sources for information programmes. As more and more public enterprises in developing countries adopt the strategic management process, the management and marketing of information services tend to improve.

2. Private-Sector Enterprises

In countries where a private sector is well established or is in the process of developing, sources of funding may be located in such diverse enterprises as domestic businesses and multinationai corporations. For example, in the expanding telecommunication business alone, five levels of private-sector involvement has been identified in developing countries: subcontracting, equipment supply, network access and use, private local services and purchase or lease of franchises. The thrust into telecommunications and high technology production, characteristic of newly industrialized countries, creates an environment conducive to the use of private sector experience in turning policies into realities.

The advantages of implementing information programmes in the private sector include the experience with the market, management capabilities, interest in high quality products and services, and a growing appreciation of information for strategic decisions. The Unions of Chambers of Commerce and Industry are often useful contacts to private enterprises and services. It should be noted that the involvement of industrial representatives in the information policy planning from the very beginning will be essential in order to build the interaction necessary for a possible funding relationship.

In the private sector, the provision of funds for information is often handled as an overhead item of expenditure and as such, it is often costed as a percentage of the total expenditure of the programmes of the given institution. Information activities in these cases are often planned as part of an overall programme. The main difficulties lie in determining what this percentage should be (8) and in incorporating this percentage into guidelines for national information policy making. However, as corporations increasingly recognize the returns of their investment in information and data use, they tend to improve the fiscal management of information resources and services. One form of improvement is the inclusion of the cost of information resources and management as a line item in the budget. Such change increases the efficiency and effectiveness of establishing information programmes in the private sector.

3. Nonprofit Private Sector

There are parts of the economy's private sector that have been generally overlooked as potential funding sources in developing countries. Social organizations, research programmes, educational institutions and similar nonprofit enterprises have been struggling organizational entities requiring a share of national funding themselves. However, as the strength of the private sector grows, the role played by its nonprofit components increases. The contribution of such organizations to the implementation of the national information policy can range from cash inputs to in-kind contributions, for example serving as organizational linkages to funders or performing some administrative functions.

It is useful to consider the example of funding educational programmes in the country because the measurement of the benefits of education and information services is equally difficult. As the educational sector, information resources and services can utilize the experience of nonprofit private organizations with planning, coordination, research methods or budgeting models. Although this part of the economy cannot be relied upon for substantial funding, it should nevertheless be considered as a potential alternative.

4. **Revenues from Information Products and Services**

This is the most difficult, but at the same time, the most desirable goal of financial planning for information services. There are two stages in the development of fee-based information services: (a) the recovery of costs and (b) the generation of additional revenues. The question must be considered: how can revenues be raised to support the continuous offering and updating of services? Even in service sectors such as health and education, an initial investment by the government must be followed by the commitment of local authorities and organizations to cover recurring costs in the future. Health and education are family wants in every country but information services, in most cases, have not yet been recognized as essential.

One cannot predict people's willingness to pay for information resources and services without having some understanding of social forces and the motivations of society. Two of the indicators are the technological capacity and the research sector of a country. Nations with considerable interest and investment in information and communication technology witness a growing appreciation of information and data by the educated segments of their populations. Furthermore, countries where analytic tools are used for public and industrial planning, are experiencing increasing exploitation of existing information resources. People understand that services cost money, and they tend to be more willing to pay fees for services than to pay taxes, provided that the information products they receive are tangible and wanted. The connection between the payment and services and products received must be well defined and explicitly stated.

Foreign Funding Sources

Developing countries may request assistance from foreign national and international sources for the funding or co-funding of information resources and services mandated in new policy instruments. There are three principal channels of financing and a new, emerging mechanism that may be introduced in the range of alternatives. Foreign technical assistance is often based on (a) bilateral agreements with foreign national aid agencies (U.S. AID, IDRC, DSE, etc.), (b) multilateral agreements with intergovernmental organizations (U.N. agencies, regional development banks, EC, ASEAN, SADCC, etc.), (c) contracts with international nongovernmental organizations, and, less frequently, (d) on joint ventures.

In any case, the fundamental requirement for either development assistance or a joint business venture is a clear and well documented proposal or project plan. Even in the case of technical aid when the main objective is empowering support to the poorer country rather than revenue raising, the information resources and services for which funding is requested must be sound, competently planned, efficiently budgeted and must have a built-in potential for becoming self-supportive after the foreign funds expire. Systems analysis and cost-benefit analysis are the analytic tools most frequently used in pilot projects that have the persuasive effect to attract foreign funding. Systems analysis is most likely to lead to a coordination of budget allocations with development objectives; cost-benefit analysis is most likely to succeed when applied to programmes which are expected to result in services and/or tangible goods.

Most national and international agencies have their own procedures for project descriptions and funding requests. These should be obtained from the expected funding agency's regional office, if there is one, studied and followed whenever possible. In the case of joint ventures there must be assurance that the information resource and service proposed will generate income immediately after the project's inception in order to attract capital investment.

The funding request process requires both technical and political skills. The nature and extent of a bilateral or multilateral assistance project are based on at least two kinds of legal documents determining the relationship between the aided and aiding nations: a national law in the assistance-giving country and an international treaty negotiated between governments and signed by the representatives of both. The proposal requesting funding should include, as a minimum, the long-range goals and immediate objectives of the proposed information programme, expected significant benefits, a review of experience and/or research relevant to the proposed programme, a project plan with a time-table of the phased planning, implementation and evaluation, and the budget. Descriptive notes explaining budget items should accompany the table of figures.

1. National Technical Aid Agencies

Assistance to the developing nations has long been a tradition in the economically advanced countries and the assistance process has been institutionalized in the form of government agencies and private voluntary organizations (POVs). The larger national agencies use their regional offices (sometimes called "missions") or private organizations to channel aid to developing countries.

The value of technical assistance from national agencies is enhanced by their ability to disseminate information to the programmes they are funding. Many national agencies have at least three types of information services to offer: (1) information dissemination to specific sectors such as agriculture, education, energy production, health, (2) response to requests for information or research results through their regional offices, and (3) referrals to the most likely organization or information source. Some national agencies (e.g. U.S. AID, The British Council, The International Development Research Centre of Canada, IDRC, and the Deutsche Stiftung für Internationale Entwicklung,

DSE) (see Annex G.1) increasingly consider the building of information and data services in a country as integral components of development.

2. Intergovernmental Organizations (IGOs)

Multilateral agreements among governments have resulted in the creation of many intergovernmental organizations. An intergovernmental organization is an official body representing national governments which are their contribution-paying members (e.g. The United Nations, the UN-specialized agencies, The World Bank, The Organization of American States, OAS). Intergovernmental Organizations, with their regional offices, are excellent sources for supporting information resource and service development in agriculture (The Food and Agriculture Organization of the UN), health (The World Health Organization), industrial information centres (The United Nations Industrial Development Organization), or education and science (The United Nations Educational, Scientific and Cultural Organization).

Some intergovernmental organizations are called "donor" agencies although this term is misleading (Annex G.3). For example, the International Bank for Reconstruction and Development (The World Bank) and its soft-loan affiliate, The International Development Association (IDA) provide loans and credits for specific projects. The International Finance Corporation (IFC), another World Bank affiliate, assists private enterprises in developing countries. Borrowers may include a member government, a public agency or corporation, or a private body or corporation with the government's guarantee. Another example, the United Nations Development Programme (UNDP) offers self-help rather than charitable donations. It focuses on assistance to governments in drafting policies, improving administrative procedures, managing organizations and providing training.

The implementors of national information policies may also consider specialized UN sources for the support of information programmes, for example the UN Development Fund for Women (UNIFEM), the UN Fund for Science and Technology Development (UNFSTD) or the UN Revolving Fund for Natural Resources Exploration (UNFRFNRE).

Of special significance for regional information system development is the tendency of UNDP, in cooperation with the UN Department of Technical Cooperation for Development (UNDTCD), to support policies, mechanisms and services that bring developing countries into interaction with each other in order to foster South-to-South interdependence as opposed to South-North dependence. Another trend, the development of small specialized information centres that are linked together by state-of-the-art communication media (e.g. Centro Internacional de Agricultura Tropical), may work for the benefit of specialized national information resources and services which could expand into a supranational service and link up with a network.

IGOs also serve as sources for information acquisition for new national centres because they publish and disseminate an abundance of sector papers, country reports, research studies, statistical compilations and policy analyses.

3. International Nongovernmental Organizations (NGOs)

Nongovernmental organizations represent technical and professional expertise in their fields, are non-political in nature (Annex G.2). A nongovernmental organization is an international body with national, scientific, professional and technical societies as members (e.g. International Council on Archives, ICA, International Federation for Information and Documentation, FID, the International Federation of Library Associations and Institutions, IFLA). IGOs often use NGOs as channels for funding specialized projects.

Although NGOs themselves have very rarely a possibility to finance information policy related activities, national agencies and groups benefit by contacts with international NGOs in several ways: NGOs can form a link to the funding arm of an IGO; assist in project selection, identification and negotiation; help to formulate effective proposals; present proposals at joint specialized IGO/NGO meetings; provide information for the justification of a proposal; occasionally fund a project in cooperation with an IGO.

Several types of organizations fall into the NGO category: scientific and technical societies, professional associations, research networks, international organizations of trade unions, religious organizations, etc. It is worthwhile to study the objectives and programmes of NGOs pertinent to a national information programme's needs in a source such as the *Yearbook of International Organizations*. Attending the conferences and using the publications of certain NGOs can also be useful.

A special type of NGO, the private voluntary organization (PVOs) has been growing in importance in recent years. A PVO is a non-profit organization which carries out development assistance programmes. The term "voluntary" stems from the nature of PVO funding: they receive voluntary contributions rather than set membership fees from the public. PVOs include religious and secular organizations, self-help organizations, cooperatives, specialized foundations and grant-making institutions.

Their organization is known as moderately bureaucratic, flexible and strongly grass-roots oriented. Project management is usually adapted to newly discovered needs and experimentation is condoned. PVOs are information-intensive, very interested in dissemination and networking processes, and are useful links to the IGO funders of information programmes. Examples of PVOs include the international organizations Save the Children, the African Medical and Research Foundation (USA), the ASIA Foundation, and the Institute for International Development, Inc.. Cooperation among these diverse organizations is promoted by the International Council of Voluntary Agencies - a very useful contact for developing countries.

A very interesting nongovernmental organization, the Trickle-Up Program, Inc., is a potential funding source for small-scale information businesses. TUP provides very small grants to groups of five or more people who will commit specified hours of their otherwise unemployed time to a business enterprise. UNDP funded a survey of TUP operations and demonstrated considerable success.

4. Joint Ventures

Indicative of the demands of developing economies to participate in international economic affairs, a few developing countries have begun to enter partnership relations with foreign businesses. In a joint venture, each partner must gain something: tax incentives, lower labour costs, high-quality, low-cost components of products or experience in processes. Arrangement must be fair and well balanced. Foreign direct investment (FDI) aims to obtain a lasting interest in a business operating in a country other than the investor's own. To attract FDI through joint ventures is economically beneficial to all developing countries and their prime economic goal is to create transnational corporations within their own region.

National information policies tend to focus on the traditional forms of information resources and services: Bibliographic, library and documentation services and data handling in science and technology. While these services are often supported by foreign technical aid, there is little evidence that they can be turned into enterprises, with the possible exception of technical data delivery.

Another component of the information economy, the business data industry has a much higher potential to attract joint business projects. Data goods (computers and telecommunication equipment) and data services (data processing, information storage and retrieval) have become crucial to economies not only in their own right but also as the infrastructure necessary for international trade in other goods and services. The problem is that developing countries have weak domestic data resources and therefore are dependent on accessing the data services of other countries. It is in the interest of all developing countries to strengthen their own data resources. The major benefit of joint ventures in the data industry, in addition to foreign investment, is the acquisition of new skills, knowledge and domestic data handling capacity.

Some of the channels for developing countries to learn about possible joint business ventures and processes are the "Investor Forums" organized by UNDP which help managers in developing countries to discuss their projects or interests with potential investors and to negotiate agreements. Another pertinent organization is the United Nations Centre on Transnational Corporations that publishes documents such as *Arrangements Between Joint Venture Partners in Developing Countries*, 1987.

C - PROCEDURAL ASPECTS

C.1 **The ad hoc working group or the follow up group set up after the national** consultation (see Chapter VII-C) should start studying the financing possibilities as early as possible, in particular by raising:

. its knowledge of the relationship between the national development plan, the national budget and the possible sources of financing;

. its ability to effectively present the information requests for the implementation and operation of the policy.

C.2 **The national funding sources should be investigated first. While in many** countries, especially developing ones, governmental sources are the best known, other financing possibilities (such as the private sector enterprises, non-profit private organizations and opportunities of gaining revenues) should not be neglected and if necessary studied in depth.

C.3 **If national funding potential is insufficient to complete the information plan of** action then external donors should be approached to complement the necessary resources. This will require an investigation of potential donors, their financing regulations and procedures and their readiness to support the requests.

C.4 **The project proposals should meet two basic conditions**:

. they must be well prepared

. they must be given high priority by the organization or government seeking the funds.

In addition to the aspects described earlier (see Chapter VII), the proposal has a better chance to succeed if:

- it attracts the donors with investment perspectives. The proposal should not stop at describing needs but should also provide solutions and show what tangible results funding will bring;

- it bases appeals on funders' priorities; appeals based on information importance alone has little impact; information programmes should be associated to important capital development projects (i.e. illiteracy, major agricultural project, ...) which help the funds to achieve **their** goals or self-interest (i.e. leave a legacy);

- it indicates support from an influential person(s). Funders view the information activities from a different perspective when an important personality supports them;

- it indicates support from the constituency (i.e. users); what people want is more critical in fund raising than what the information community wants;

- it provides information on whether anybody is already financially supporting the project; early donors set up the pace for others and it is essential that the seekers of funds show that they are ready themselves to commit their own budget to the project;

- it asks for specific amounts because specificity is more effective in fund raising.

CHAPTER XIII

OPERATION AND EVALUATION OF INFORMATION POLICY

A – Objectives

B – Characteristics

C – Procedural aspects

CHAPTER XIII

OPERATION AND EVALUATION OF INFORMATION POLICY

A - OBJECTIVES

Information policy-making is a continuous process which can never be considered as finished. The national policy on information in force is a legal instrument which should be reviewed all the time to ascertain that it remains pertinent to the ever changing information environment. This calls for periodic evaluation of the existing policy provisions and their enforcement in view of their readjustment, if needed, through appropriate amendments, additions or deletions. This chapter shows how a national policy on information operates in the development of information activities and what is the role of evaluation in this process.

B - CHARACTERISTICS

A policy on information, like any other types of policies, is interactive in a cycle with the planning and programming processes of information activities:

- on one hand the formulation of policies precedes information developments in order to orient the latter in better responding and serving the country's overall social, economic or cultural policy.

- on the other hand, the formulation follows the new developments in the field of information, because policies are late in catching up with the rapid information advances and its impact on the national economy and society.

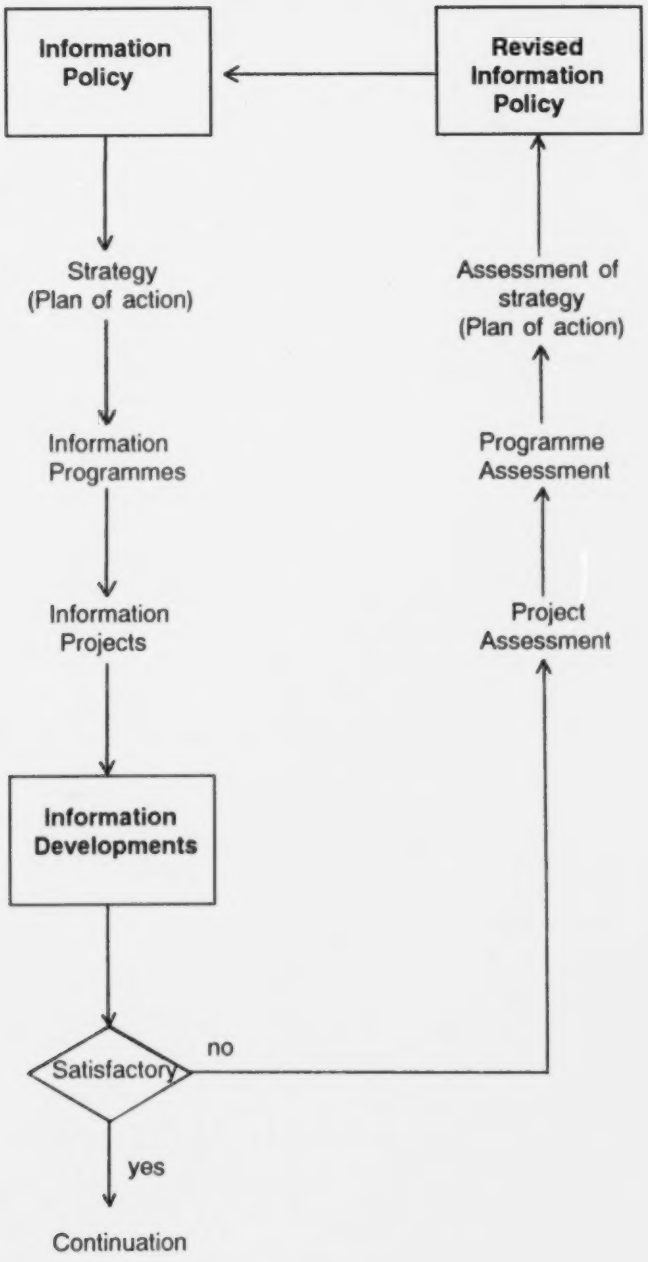

Figure 10: Operation and Evaluation of Information Policies

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Figure 10 shows the interrelationship of information policies with the overall development process of information activities. An information policy, as was seen in Chapter XI, is implemented through the elaboration of a plan of action or strategy. The latter includes a number of information programmes and projects which objectives are to improve the developments of new information resources systems and services.

In turn, the developments of information activities, whether initiated or not from existing information policies, create a need to review these policies. This is done through the assessment of the new developments i.e. the assessment of results achieved from the initial projects, programmes and plan of action (strategy). In case the strategy proves to be still valid the original information policy could continue to be applied; if this is not the case, the strategy and the information policy need to be readjusted in accordance with the new information environment.

Thus the policy evaluation which aims at improving the formulation of future information policies is an integral part of the cycle. This evaluation has several characteristics:

- it must cover the **pertinency** of existing information policy provisions to the information environment and the **level of enforcement**; both are key indicators for an eventual revision of information objectives, strategies and programmes; they presuppose however a preliminary knowledge of the quality of the information environment in which the policies are operating. Indicators given in Chapter IV may be helpful in this regard;

- it will be needed at all levels of professional responsibilities:

  a) the evaluation of the project implementation i.e. the evaluation of activities that comprise this project.

     example: *training staff for an STI centre (project) through provision of three fellowships (activity), organization of a seminar (activity) and design of curriculum (activity);*

     this evaluation is normally carried out at periodical intervals by the person responsible for the project or **project manager**.

  b) the evaluation of the programme implementation i.e. the evaluation of projects that comprise this programme.

     example: *establish an STI centre (programme) through training of staff (project), building the school (project), ...;*

this evaluation is normally carried out once or twice a year by the person responsible for the programme or **senior manager**;

c) the evaluation of the implementation of the plan of action (strategy) i.e. the evaluation of the set of programmes that comprise the information plan.

example: *develop the country's information services and systems (plan) through the establishment of an STI centre (programme), the setting up of specialized databases (programme), ...*

this assessment is normally carried out by the **top administrators** or planners, as a periodical exercise.

- it is worth carrying out only if it serves the purpose of improving the preceding situation. The evaluation therefore should include not only the assessment of the outcome of an activity, project and programme but also the assessment of the methodologies and means used to achieve this outcome.

C - PROCEDURAL ASPECTS

There exist many ways of evaluating a programme, but none of them should be applied **in texto**. Each country has its priorities, its peculiarities, its special objectives, its capacities and capabilities. Each country should find the evaluation that is best suited for its particular environment and adapt it to its needs.

The work of evaluation is a professional work. The project officer carrying out an activity can be given the responsibility to self-evaluate his/her work in terms of listing the results he/she achieved and to describe the shortfalls he/she experienced in the procedures used. He/she cannot however be assigned the task to assess whether his/her results have met the policy objectives of the country. This is the duty of professional evaluators who, collaborating closely with the project officers on one hand and the policy makers on the other, provide the link between the two. This role of matching the outcome with the objectives and suggesting eventual changes is a key function for a good policy-making process. Unfortunately, this is often forgotten and much energy, in terms of time, money and human resources is often wasted as a result. It could be therefore wise that any policy-formulating process include a periodic evaluation process.

C.1 **Once the information policy has been put into operation, schedules should be** established for carrying out an evaluation of the results achieved at regular

intervals; these schedules should include evaluation at all levels of professional responsibilities;

C.2 **Evaluation is best carried out through the preparation and analysis of** periodical reports e.g. project progress or completion reports, programme completion report, plan of action completion report;

C.3 **The results of periodical reports are reviewed by the policy makers to** determine to what extent the present policies provisions are relevant to the existing information environment and to take decisions on their eventual adjustments;

C.4 **The planners design the programmes to put the revised information policies** into operation through adequate information activities.

ANNEX A

EXAMPLES OF GENERAL INDICATORS (11, 7, 16)

1. ENVIRONMENTAL INDICATORS

The environmental indicators are related to physical, economic, social, political and cultural aspects of the country. Arranged from general to more specific they generally include:

1.1 Physical environment

Provides a measure of the geoclimatic conditions, ease of internal and international communications which make information activities easier or more difficult.

1.1.1 Homogeneity/territorial continuity

It is assumed that greater territorial diversity creates greater variety of information needs and more complex information activities.

1.1.2 Population density

It is assumed that the greater the density, the easier the intercommunication of information.

1.1.3 Proximity to "information pole"

It is assumed that the greater the distance between a given place to the "information pole" within the country or abroad, the more difficult and expensive the access and use of external information.

1.1.4 Climate appropriateness

It is assumed that extreme temperature and humidity hinder the preservation and use of documents and increase their cost.

1.2 Transportation infrastructures

Provides a measure of the relative information transportation facilities from one point to the other of the territory.

1.2.1 Density of roads (railroads, water ways ...)

It is assumed that the higher the density the easier the communication of information.

1.2.2 Communication means (mail systems, telephone traffic, telecommunications, telex, facsimile, international meetings, international associations ...)

It is assumed that the better the communication the more important the flow of information among individuals and institutions.

1.3 Socio-cultural environment

Provides a measure of the relative productivity and receptivity with regard to information.

1.3.1 Economically active population

It is assumed that the larger the economically active population, the larger the number of producers and users of information and the more intense the information activities.

1.3.2 Concentration of population

It is assumed that the more dispersed the population, the more difficult are the dissemination of, access to and use of information will be.

1.3.3 Literacy rate

It is assumed that the lower the literacy rate the more difficult the dissemination of, access to and use of information will be.

1.3.4 Language, ethnic, religious homogeneity

It is assumed that greater the number of languages, ethnic and religious groups in a country more diverse will be the information services required.

1.3.5 **Associations, trade unions and nonprofit organizations**

It is assumed that all of these have an enhancing effect on the creation and dissemination of information.

1.4 General economics

Provides a measure of the overall economic resources of a country and therefore support and incentives for information activities.

1.4.1 **Gross National Product per capita**

It is assumed that the higher the GNP the higher the overall economic capacity of a country and in particular the resources available for information activities.

1.4.2 **Gross domestic investment (as percent of gross domestic product)**

It is assumed that the higher the investment the more active the economy and the greater the needs for information.

1.4.3 **Private consumption expenditure**

It is assumed that a higher private consumption expenditure may facilitate the private consumption of information and information goods.

1.4.4 **Inflation rate/availability of hard currency**

It is assumed that a high inflation rate reduces the availability of hard currency and jeopardizes the overall economic capacity of a country and in particular the resources available for information activities.

1.5 Administrative controls

Provides a measure of the institutional, operational and regulatory procedures at the national level which can facilitate or impede the information activities.

1.5.1 **Stability of government**

It is assumed that frequent changes in ministerial positions hinder information activities by the discontinuity they introduce in policies, people and current management practices.

1.5.2 **Central planning with central budget**

It is assumed that the administrative procedures resulting from such a planning hinder information activities, in particular since information and information processing goods are generally not considered to be essential.

1.5.3 **Departmental (decentralized) planning with central budget**

It is assumed that such a planning facilitates dissemination and access to information, making coordination of these activities at the national level relatively easy.

1.5.4 **Departmental (decentralized) planning autonomy**

It is assumed that such a decentralized planning increases dissemination and access to information but due to its dispersion hinders coordination of these activities at the national level.

2. DEVELOPMENTAL INDICATORS

The development indicators show a government's choice of priorities in pursuit of its national goals. They generally include (from general to more specific):

2.1 Conceptual priorities

Provides a measure of how the nation conceives its developmental and administrative patterns, which can either encourage or discourage the development of information activities.

2.1.1 **Sources of wealth**

It is assumed that the priority the government gives to one or another source of wealth (exploitation of natural resources, manufacturing goods, marketing services) will affect or impede information activities.

2.1.2 **Industrial diversification**

It is assumed that the greater the emphasis on the diversity of public/private, small/large, national/multinational companies, the greater will be the diversity of information services.

2.1.3 **International cooperation**

It is assumed that the intensity of international relations is linked with the possibilities of international information transfer.

2.1.4 **Public administration structure**

It is assumed that the more developed the public administration structure the more information will be generated and required by the public sector.

2.1.5 **Government diversification**

It is assumed that the higher the number of government entities (national, local, state ...), the more information is produced, accumulated and disseminated.

2.2 National priorities

Provides a measure of the relative national long-term goals in development, which can indicate priority areas for the development of information activities.

2.2.1 **Priority goals**

It is assumed that the higher the priority given to a particular developmental goal (social, economic, cultural ...) the more information is produced and used in this area.

2.2.2 **Priority sectors**

It is assumed that the higher the performance in a broad sector of activity (i.e. education, health, agriculture, ...) the more information is needed in this sector; one may infer that this also reflects a higher level of generation and use of information.

2.2.3 **Promotion of research activities**

It is assumed that the higher the support to research the more intense will be the generation and use of information.

2.2.4 **Promotion of education**

It is assumed that more education and more educated people mean a greater capability to generate and use information as well as more intense information activities in this area.

2.3 Sectoral priorities

Provides a measure of the relative short term goals through specific inter and intrasectoral programmes of action, which could indicate areas in which provision of specialized information is needed.

2.3.1 Priorities in exploiting national resources

It is assumed that the exploitation of specific natural resources is likely to generate specific patterns of information needs.

2.3.2 Priorities in manufacturing goods

It is assumed that industrial priorities are likely to generate specific patterns of information needs.

2.3.3 Priorities in agriculture

It is assumed that agrarian priorities are likely to generate specific patterns of information needs.

2.3.4 Priorities in the service sector

It is assumed that emphasis on a given service is likely to generate specific patterns of information needs.

2.3.5 Priorities in the social and cultural sectors

It is assumed that social and cultural priorities are likely to generate specific patterns of information needs.

ANNEX B

EXAMPLES OF INDICATORS ON INFORMATION RESOURCES AND SERVICES
(7, 11, 12, 27)

1. INFORMATION INSTITUTIONS

Provides a measure of the relative number, size and capacity of the information infrastructures in the country and indicates the intensity of the economic activities devoted to information.

1.1 Specialized information and documentation centre

It is assumed that the more numerous the centres, the better the information reference sources. These centres often exist in every place where there is a major discipline, mission or problem-oriented activity:

- government ministries
- university facilities
- professional associations and societies
- independent research laboratories
- foundations
- hospitals/museums/banks/religious institutions, ...
- industrial/commercial business
- international and foreign organizations

1.2 Public libraries and archives

It is assumed that the larger the number of public libraries and archives, the more important the stores and use of formal and informal literature.

1.3 National library and archives

It is assumed that the larger the national library and archives, the greater the stores and use of information.

1.4 **School and university libraries**

It is assumed that the larger the number of school and university libraries, the more important the diversity of information resources.

1.5 **Special libraries**

It is assumed that the larger the number of specialized libraries, the more important the diversity of information resources.

1.6 **Referral centres**

It is assumed the better and more numerous the referral centres, the easier the access to information sources.

1.7 **Information consulting and advisory services for entrepreneurs**

It is assumed that the better and more numerous these services, the better the access and use of information. Many have commercial interests.

1.8 **Information and data analysis centres**

It is assumed that the better and more numerous such centres, the better the dissemination of and access to information. These centres extract information from various types of publications, evaluate it and prepare it in a format convenient to the users; many have commercial interests.

1.9 **Publishers, printing services and enterprises; clearinghouses; information repackaging services; data processing, data management, data handling services**

It is assumed that the better and more numerous such services, the better dissemination of and access to information. These services supply information in various forms: publications, abstracts, indexes; many have commercial interests.

1.10 **Information oriented professional school**

It is assumed that this variable gives a fairly accurate indication of the level of development of information activities.

2. INSTITUTIONAL RESOURCES

Provides a measure of the relative importance of the services the institutions mentioned under 1 can provide and their availability to the users.

2.1 Collections

It is assumed that the larger the supply and the more diversified the collections, the more useful they are to the users. These may include published and unpublished material:

- printed books, public documents ...
- technical and research reports
- patent, trade contract collections
- internal records, surveys and inventories
- proceedings of meetings
- statistical and numerical data
- AV collections, maps ...

2.2 Human resources

It is assumed that more qualified and larger number of skilled labour force, the better the services. These may include not only personnel working in the institutions but also training opportunities in the country, and the status of information workers.

2.3 Physical facilities

It is assumed that the more the facilities are diversified and updated, the more varied and efficient the services and supply of information will be. The facilities to be included here range from standard, computer, microform, printing and reprographic equipment, to facilities for providing translation, SDI, online interaction, publication, document dissemination, networking, extension services.

2.4 Financial resources

It is assumed that the larger the relative share of the national budget by the various components of the information sector, the larger the size of the economic activities fully or partly devoted to information. The resources considered should include not only funds granted for the support of information facilities and services but also revenues made from the marketing of services.

3. USERS

Provides a measure of the relative number, categories, and types of information users and indicates their information needs.

3.1 User groups

It is assumed that the larger the number and the diversity of user groups, the more important and complex the information needs. User groups are students, engineers, teachers, etc.

3.2 Individual users

It is assumed that the larger and the more varied the population of individual users, the more important and complex the needs for information. The individual users range from policy makers through researchers, administrators, practitioners, to non-technical users (farmers, students, ...).

3.3 Institutional users

It is assumed that the larger the number and the diversity of collective users, the more important and complex the information needs. Collective users are institutions such as research institutions, ministries, private and public enterprises, banks, hospitals, etc.

3.4 Intermediaries as users

It is assumed that the larger number of such users the more important the needs for information. They include on-line searchers, reference librarians, information consultants, etc.

3.5 Users' services

It is assumed that the most varied the assistance provided to users the easiest is the access to information. This includes all intermediaries (subject specialists; referral services ...) who help the user to find and select information he needs; but also user studies, extent and location of marketing of information services (including publicity).

3.6 Users' education and training

It is assumed that the presence of user education, training and sensitization programmes increases the users ability to access and use information.

ANNEX C

EXAMPLES OF POLICY ISSUES (18, 27)*

POLICY ISSUES DEALING WITH THE ROLE OF INFORMATION IN NATIONAL DEVELOPMENT

Problem:

The service economies are gradually gaining ground on the national resource and manufacturing economies. In particular, the concept of information services as a national resource indispensable to all national development programmes and activities is slowly emerging. There is increasing evidence of the impact the application of information has on the productivity of the various development sectors. The national authorities give increasing attention to the relation between information resources and services and the economic growth and social development.

Policy issues

The necessity to:

- accelerate the emergence of the concept of information as a national development resource;
- accelerate the acceptance of this concept by the national leading administrators within the information profession as well as among the government decision makers;
- define the appropriate role of the government in the development and use of national information resources and services (formulation of plans, policies, guidelines; implementation, monitoring, control of the activities, ...), in view of the national political and social philosophies and the government structure.

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* Additional descriptions of policy issues can be found in (29, 32-36, 44-82)

POLICY ISSUES DEALING WITH THE DEVELOPMENT OF NATIONAL INFORMATION RESOURCES

Problem:

The national development efforts generate a growing volume of indigenous bibliographical and graphic information and data. The importance of capturing and recording this into an organized national pool of knowledge is increasingly recognized. Nevertheless, the domestic information products in terms of coverage, presentation and ease of use, remain inadequate, in quality and timeliness. They are not responding to the expectations of users.

Policy issues:

The necessity to:

- encourage the information industry (e.g. activities of publishers, database producers, information and information products distributors, information and library services, software producers, data banks, etc.) which employs many types of professionals, involves large investments, produces goods and services that have a cost, price and value, and in general constitute an important part of the gross national product;
- subsidize research and development in the information field;
- encourage the generation of information (bibliographical numerical and statistical data, AV, ...);
- organize the recording, publishing and distributing of the results of local scientific and technical research in various areas of development;
- support the efforts to improve the quality of domestic information and of information carriers (journals, reports, ...).

POLICY ISSUES DEALING WITH THE DEVELOPMENT OF NATIONAL INFORMATION SERVICES AND SYSTEMS

Problem

The resources in specialized information and professional knowledge being generated in the country or tapped from abroad should be organized and circulated for planning, decision-making and problem-solving purposes. Information services and systems need be developed to best serve the economic growth of the country through national research, education and industrial/agricultural development. The optimal application of information technologies in modernizing and improving the traditionally manual services is vital not only for the upgrading of the national services and systems but also in keeping the country from lagging behind the other countries in world service economies.

Policy issues

The necessity to:

- encourage the creation, development and improvement of all types of information storing, handling and disseminating infrastructures (specialized libraries, documentation centres, referral centres, databases, ...);
- encourage the establishment of "information brokers" services and other types of information processing and repackaging services (i.e. clearing-houses; SDI; current awareness; literature search, translations, ...);
- encourage the implementation of plans and programmes aiming at developing domestic resource-sharing potentials, i.e. national norms and standards, national specialized networks, national cataloguing systems, national information and document exchange programmes (such as interlibrary loans, ...);
- encourage the setting up of communication facilities (mail, telecommunication, ...) to facilitate the in-flow of information from foreign sources;
- give attention to the compatibility of systems to facilitate information exchange;
- invest in computer and communication technologies for the modernization of information services and systems;
- review matters related to the importation of information equipment (i.e. tariffication, ...) and the cost and pricing of data transmission (TDF, ...).

POLICY ISSUES DEALING WITH THE ORGANIZATION OF INFORMATION ACTIVITIES

Problem

The quality of the information services and information and documentation delivery mechanisms is measured by their performance in meeting the specific information needs of a full range of industrial, commercial, scientific, technical, educational and social activities and by the cost effectiveness of their operations. Information makes money when it is well managed. Unfortunately these services, when they exist, are dispersed in various institutions, often concentrated in a few major urban areas, not cooperating with each other and managed with different degrees of success. Their information resources management, promotion and marketing activities are often insufficiently developed to ensure their efficiency.

Policy issues

The necessity to:

- organize the information resources and services so as to ensure comprehensiveness of coverage, operational feasibility, compatibility and systems interconnection among the various services;
- ensure the harmonization of the development of the different national information services;
- promote information-resource-sharing principles and modalities including cost sharing (within sectors at national and intersectoral levels);
- allocate national funds for information-resource management and promotional activities.

POLICY ISSUES DEALING WITH ACCESS TO INFORMATION

Problem

There are many obstacles to the flow of and access to information – legislative, administrative, financial, political and technical. Foreign and even domestic information and information sources are often difficult to reach because these obstacles cannot be easily overcome. Measures and procedures currently in force are felt unsatisfactory by users because in most cases they aim at restricting rather than broadening the access; in addition, although accurately formulated they are seldomly enforced in practice.

Policy issues:

The necessity to:

- have a clear picture of when, where and what constitutes an obstacle to the access of information to the country and to adopt appropriate principles, criteria and administrative procedures for their removal;

- enforce the application of these principles and procedures by providing guidance for concrete actions (national registration and deposit; national import/export regulations; national regulations in trading information ...);

- treat information as a value added commodity and determine the degree of access to it according to its cost and especially the type of users seeking it (i.e. some information could be given away to national enterprises, but sold abroad, ...);

- encourage at the institutional level, the application of management principles, which facilitate the flow of information within the individual corporations (associations, companies, societies, ...) and among themselves.

POLICY ISSUES DEALING WITH THE DEVELOPMENT OF INFORMATION

MANPOWER

Problem

The utility of national information resources and services is based on the presence of qualified personnel manipulating it at all stages (acquisition, processing, distribution) and all levels (para-professional, professional and administrative). There is an urgent requirement for an accelerated training of information workers both in number and quality. Nevertheless, the physical and financial resources for such plans and programmes are limited in comparison to this requirement and career development opportunities in the information field do not receive all the support they deserve from the national authorities.

Policy issues

The necessity to:

- recognize the importance for the country's future economic and social development to promote the information manpower training programmes and facilities;
- maintain a good knowledge of national information manpower requirements (number, qualifications, ...) in the various categories in the context of a rapidly changing society;
- encourage the institutionalization of the educational programmes in the field of information;
- maintain status and salary scales for the different categories of information workers in parity with those of other comparable professional and technical services in the country.

POLICY ISSUES DEALING WITH THE USE OF INFORMATION

Problem

A significant proportion of the information resources and services is usually under-utilized. Among the reasons for under-utilization are the inappropriateness of some of the resources and services available, users' unawareness of the existing information potentials, and users' inability to use information systems. These results in an ineffective utilization of information and information sources available in various sections of the society.

Policy issues

The necessity to:

- encourage the growth of information resources and services most appropriate to the needs of users in the priority areas of national development;
- raise awareness about the availability of relevant information resources and services and about their potentials;
- raise the perception of people regarding the marketing value and utility of information resources and services on his or her success in problem solving and changes that might follow;
- assist people in enhancing their propensity and ability to seek information and apply it to problem solving processes in all economic and social development activities;
- investigate the use of value added processes for the evaluation of user satisfaction.

POLICY ISSUES DEALING WITH PARTICIPATION IN INTERNATIONAL INFORMATION PROGRAMMES AND SERVICES

Problem

National development cannot depend only on domestic information resources and services; it also relies heavily on information brought from abroad. A country, or a business, which wishes to derive optimal benefits from foreign information resources and services needs to collaborate in and contribute to international information exchange and resource-sharing programmes. This calls for its active participation in intergovernmental and multinational cooperation schemes in all relevant areas (i.e. science, technology, economic, trade, communication, ...). The United Nations, its specialized agencies and similar international bodies, have much to offer for the promotion of such cooperation and should be better utilized.

Policy issues

The necessity to:

- raise the national awareness about the existing international programmes and the possibilities they offer;
- stimulate a more active participation of nationals in such international programmes; through bilateral and multilateral arrangements;
- encourage the dissemination of information and experiences from abroad within the country;
- adhere to international agreements, conventions and other policies governing the transborder information and data flow.

ANNEX D

EXAMPLES OF POLICY STATEMENTS AND RELATED STRATEGIES (2, 18)

ROLE OF INFORMATION IN NATIONAL DEVELOPMENT

It shall be the policy of the government to promote the development of national information resources and services as an integral part of the national development plan.

Implementation steps

- Formulate a national policy on information for the development of information resources and services and integrate it in the national development policy;
- Design a national work plan for the development of national and institutional information resources and services as an integral part of the overall national development plan and strategies; so that the available information, data and services remain relevant to the development needs;
- Institute programmes and activities to implement the work plan at the national and institutional levels so as to support the national economic growth and national product;
- Adopt methods and procedures which would ensure that the government and its institutions contribute and provide support to the development, operation, and coordination of information, informatics and systems infrastructures, policies and plans;
- Design orientation programmes to sensitize top-level executives and administrators to the concept of information and data as a primary resource for their areas of activity and the national development;
- Give priority to the inclusion of an information component with a separate budget line in all sectoral and national development plans and programmes.

DEVELOPMENT OF NATIONAL INFORMATION RESOURCES

It shall be the policy of the government to strengthen the indigenous generation of all types of information, to widen its range, scope and coverage and to improve the quality of information sources, services, products and carriers.

Implementation steps

- Formulate legislation and take administrative measures to stimulate the generation, recording, publication, protection, preservation, marketing and dissemination of the nation's scholarly creative and professional output;

- Define criteria in conformity with the overall national policy on information for the provision of support to institutions and programmes of the information, informatics and publishing industry of the country;

- Adopt legislative and administrative measures which would facilitate the collection, validation, organization and computerization of numerical and statistical data for preparing information products for development planning, decision making, execution and management;

- Design programmes for quality control of information and data generated, and of recording media and data bases that carry such information in the public and private sector;

- Support research in private and public sectors in the field of information.

DEVELOPMENT OF INFORMATION TECHNOLOGY AND SYSTEMS

It shall be the policy of the government to stimulate the modernization of information handling technics and technologies.

Implementation steps:

- Review policy issues and strategies to facilitate the development, application and utilization of telecommunications, computer technology, audio-visual, photocopying, printing, binding materials and equipment;

- Design programmes to study all aspects of the utilization of information technology such as franchise for the provision of commercial communication services, cost and price for data and facsimile transmissions, introduction of videotex, copyright legislation for machine-readable databanks and software production; transborder data flow, storage of sensitive information in machine-readable format, etc. ...

- Formulate criteria for the testing and adaptation of information technology to the country's information systems;

- Recommend action for the implementation of all the above aspects.

ORGANIZATION AND COORDINATION OF NATIONAL INFORMATION ACTIVITIES

It shall be the policy of the government to establish a national coordinating mechanism or to introduce policy instruments to ensure/foster effective implementation and operation of the national policy on information.

Implementation steps

- Set up a national mechanism for the promotion, coordination and monitoring of the planning, development and management of national information resources and services;
- Formulate guidelines for the assignment of responsibilities to the various national information institutions to ensure their complementarity and to make the overall national information activities more cost-beneficial;
- Set up measures to permit a permanent exchange of information and experiences at the national level among the different (private and public) information and information related institutions;
- Establish legislative, regulatory and administrative procedures for the regular assessment of the performance of the different national information services, of the adequacy of existing national information policies and the corrections of any deficiencies thereafter;
- Set up measures to keep abreast with the requests for assistance and coordinate forthcoming proposals for support from national, regional and international sources.

ACCESS TO INFORMATION RESOURCES AND SERVICES

It shall be the policy of the government to facilitate access to information in all locations through appropriate legislations and their enforcement.

Implementation steps

- Enact legislations and principles to facilitate access to information resources and services available in the country and abroad;
- Formulate guidelines and criteria for the provision of a range of information services nationwide in selected areas of specialization and priority;
- Set up administrative procedures for the national registration of all data and information generated in the country;
- Adopt resource-sharing principles, modalities and tools on cost-sharing and pricing of services within sectors and at national level;
- Formulate guidelines for the transborder exchange of data and information, including criteria on the import of foreign information resources;
- Design effective means for institutionalizing the systematic flow and accessibility to non-traditional problem solving information and data such as for training of nationals abroad, multilateral agreements, trade of goods and services, consultancies, etc.

DEVELOPMENT OF INFORMATION MANPOWER

It shall be the policy of the government to promote and support the development of qualified personnel for the efficient management of information resources and services.

Implementation steps

- Formulate and implement a national information personnel development policy that is in harmony with the national policy on information and the national educational policies;

- Institute measures to recognize in the public sector the technical and professional character and level of knowledge and skills required to manage modern information systems and services;

- Establish job classification scheme, pay plans and status for the information professionals stipulating the types and levels of responsibilities, the necessary qualifications, and salary ranges for each job category, so as to attract and retain for the management of the information systems and services well qualified, competent, and motivated professionals;

- Institute urgent and necessary measures for increasing education and training opportunities for professional, technical and supporting staff and for improving their career prospects in the country;

- Develop, update and modernize curricula and training facilities available in the country for the various categories of information personnel;

- Institutionalize training of teachers, graduate and post-graduate programmes in information studies in selected universities;

- Establish and develop national professional associations in the fields of information science, informatics, librarianship and archives for professionals from both the private and public sectors.

PROMOTION OF EFFECTIVE USE OF INFORMATION

It shall be the policy of the government to maximize the use of information resources and services.

Implementation steps

- Establish programmes to assist the users in enhancing their ability to use information products and services effectively;

- Develop information awareness activities within the national educational system and in the different professional training programmes (i.e. engineering, health education, training of managers, executives, etc. ...);

- Set up measures to assist the users in applying effectively the specialized data and information resources and services to their needs.

PARTICIPATION IN REGIONAL AND INTERNATIONAL INFORMATION PROGRAMMES AND SYSTEMS

It shall be the policy of the government to participate to an extent as large as possible in regional and international information programmes and systems.

Implementation steps

- Set up measures for the participation of specialists from public and private sectors, in major regional and international meetings where useful exchange of information and experience on recent developments in information technologies, information systems, documentation, libraries and archives takes place;

- Establish procedures for providing large diffusion and circulation of the information and experience acquired through such participation within the different information institutions of the country;

- Enhance participation of relevant national institutions in regional and international information systems and networks and ensure maximum utilization of such services by all concerned users.

ANNEX E

Example of guidelines for the description of institutional information activities (12)

1. Name of the parent organization or enterprise of your unit _____

_____

2. Your unit is mainly dealing with which of the following broad fields of science?
(CHECK ONE OR MORE BOXES)

☐ 1	All fields of science		or:		
☐ 2	Natural sciences	☐ 3	Engineering and technology	☐ 4	Agricultural sciences
☐ 5	Medical sciences	☐ 6	Social sciences and humanities	☐ 7	Other

If your unit deals mainly with specialized fields which are not adequately specified above, please indicate:

3. The scientific and technological information and documentation collected, processed and/or disseminated by your unit relate to which of the following branches of socio-economic activities?
(CHECK ONE OR MORE BOXES)

☐ 1	Agriculture, hunting, forestry and fishing	☐ 2	Mining and quarrying (extracting industries)
☐ 3	Manufacturing industries	☐ 4	Utilities - electricity, gas and water supply
☐ 5	Construction	☐ 6	Wholesale and retail trade and hotels and restaurants
☐ 7	Transport, storage and communication	☐ 8	Financing, insurance, real estate and business services
☐ 9	Community, social and personal services	☐ 10	Specialized branch(es) not adequately described above

4. Your unit provides which of the following specific STID services, and to which kind of users?
(CHECK THE APPROPRIATE BOXES WITH AN "F" IF THE SERVICE IS FREE AND A "C" IF A FEE IS CHARGED).

TYPE OF STID SERVICE	GENERAL PUBLIC	ONLY CLIENTS AND AUTHORIZED USERS FROM EXTERIOR AND PARENT ORGANIZATION	EMPLOYEES OF PARENT ORGANIZATION ONLY
Current awareness			
Answer questions, provide references			
Permit onsite consultation of collections			
Loan services			
Microform services			
Copying and reproduction services			
Referral, advisory and consultation services			
Selective Dissemination of Information (SDI)			
Translation services			
Training in information sciences			

5. If your unit produces bibliographical bulletins, abstracts, accessions lists, catalogues and directories, and/or other secondary publications, or regularly issue bibliographical columns in publications of the parent organization, please indicate below the title, periodicity, and subject fields of these publications:

(1) Title: _____

Periodicity: _____ Subjects: _____ Provided free? Yes/No

(2) Title: _____

Periodicity: _____ Subjects: _____ Provided free? Yes/No

(3) Title: _____

Periodicity: _____ Subjects: _____ Provided free? Yes/No

6. What is the number of each of the following categories of STID personnel in your unit?

Professional STID personnel: [ ] Non-professionals: [ ]

7. The total intramural expenditure/budget allotments (cross out the inappropriate case) of your unit during the most recent 12-month period beginning in: _____ (month) 19____ (year) amounted to: _____ (in the national currency)

8. Please indicate below the quantity of information resource material available in your unit and their frequency of use during the past 12 months in terms of number of satisfied requests.

Material	Quantity	Frequency of use
Books	(volumes)	
Periodicals subscribed to	(titles)	
Manuscripts	(volumes)	
Theses and Dissertations	(titles)	
Reports	(titles)	
Pamphlets and Brochures	(titles)	
Directories and Catalogues	(titles)	
Patent & Standards Specifications	(titles)	

Material	Quantity	Frequency of use
Microforms	(units)	
Drawings, Maps, and Photographs	(units)	
Slides and other Transparencies	(units)	
Films	(titles)	
Sound Records	(units)	
Tapes and Cassettes	(units)	
Video-tapes	(units)	
Other information resource material	(units)	

For 'Other information resource material', please specify:

9. The number of: Registered [ ] or Regular [ ] users of the information facilities are:
(CHECK THE APPROPRIATE BOX ABOVE)

Collective users – Institutions such as libraries, documentation and information centres, research institutes, public or private enterprises, universities, etc. [ ]

Individual users – Physical persons such as administrators, researchers, teachers, engineers, other professionals, technicians, students, etc. [ ]

Please specify the major types (as listed above or others) of users of your information facilities:

10. Is any STID activity computerized (or computer supported) in your unit?

[1] Yes [2] No If 'Yes', please specify which:

11. If your unit has on-line access to computerized databases, please give below:

Name of Database	Country of Origin	Number of searches conducted during the past 12 months
(1)		
(2)		
(3)		
(4)		

12. Does your unit follow any particular written formal policies?

DEFINITIONS AND CLASSIFICATIONS

A. *Sector*

1. Productive sector - comprises public and private enterprises which produce and distribute goods and services.

2. Higher education sector - comprises establishments of higher education and those directly administered by or associated with them.

3. General service sector - comprises institutions directly subordinating to the central, state, provincial, district or county, municipal, town or village governmental authorities, that serve the community as a whole and provide services such as administration, maintenance and regulation of public order, public health, culture, and other social services.

B. *Type of STID activities*

1. Information handling and processing - relating to the search, acquisition, cataloguing, abstracting, indexing, storage, and other controlled organization of collections.

2. Information analysis - comprising activities in evaluating, analyzing, synthesizing, and repackaging STID; selective dissemination of information (SDI)

3. Translation - referring to the translation of documents from and into other languages.

4. Publication - involving the preparation and publication of secondary publications such as indexes, abstracts, bibliographies, accessions lists, catalogues, directories, etc., as well as primary publications such as books and periodicals.

5. References services - involving the provision of services of current awareness, bibliographical references, literature search and retrieval, and selected dissemination of information (SDI).

6. Referral, advisory and consulting services - relating to activities of advising and making referrals to other sources of information and documentation.

7. Loan of publications and documents - relating to the provision on loan of documents and publications.

8. Distribution and circulation of publications, documents, or their reproduced copies, free or against the payment of a fee.

9. Other information activities - including meetings, exhibitions, workshops, seminars and training sessions during which STID are transferred and exchanged; as well as research in information sciences, and information management.

C. *Types of STID services*

1. Current awareness - which includes the preparation, circulation and distribution of bibliographical bulletins, indexes, catalogues, abstracts, acquisitions or accessions lists, and other secondary publications, announcing the present availability and access to information material.

2. Answer questions, provide references - relating to the assistance offered to users in responding to their request and in helping them to search and locate the specific information material that they want.

3. Permit onsite consultation of collections - which indicates the availability of reading-room facilities and the possibility for users to consult documents and publications on the spot.

4. Loan services - relating to the provision on loan of documents and publications.

5. Microform services - indicating the permission for consulting of micro-reproduced documents in the form of microfiches or microfilms.

6. Reproduction services - providing reproduced copies of documents, publications and microforms.

7. Referral, advisory and consulting services - including the provision of referrals to other information sources and institutions, and advising on how to access these information sources.

8. Selective Dissemination of Information (SDI) - involving the provision of specially tailor-made bibliographies, abstracts or accessions lists relating to one or more specific subjects, in reply to requests from users.

9. Translation services - offering the possibility to translate documents from and into other languages.

10. Training in information sciences - providing long or short-term training courses in information sciences, such as in documentation, cataloguing, indexing, information system design and management, and computer sciences.

D. *Professional capacity of STID personnel*

1. Professional STID personnel - are persons directly involved in the planning, direction and execution of STID activities, such as librarians, documentalists, system engineers, computer and other information scientists.

2. Non-professional STID personnel - are persons whose work are directly associated with the performance of STID activities, but not in the professional capacity, such as administrative personnel, clerks, secretaries, reprographers, binders, computer operators, etc., and excluding maintenance, sanitation and janitory personnel.

E. *Level of education of STID personnel*

1. Graduates and post-graduates - comprising persons holding a university degree or its equivalent, and higher degrees; and

2. Non-graduates - consisting of persons not holding any university or equivalent degree; and including all those who cannot be classified in (a).

F. *Training in information sciences of STID personnel*

1. Persons with complete training in library and information sciences, which amounts to 2 to 4 years of training covering documentation, cataloguing, indexing, abstracting, information systems design and management, and related computer applications.

2. Persons having undergone short-term training in information sciences, which relates to participation in training courses of not more than 12 months each, on any of the subjects mentioned in (i).

3. Persons without any formal training in information sciences.

G. *Type of expenditure*

1. Current expenditure – covers costs of labour, acquisitions of information material and services, minor equipment, expendable supplies, and other current expenses. Two important categories under this type are:

   (a) Labour costs – comprise wages and salaries, bonuses, paid holidays, contribution to pension funds and social security, payroll taxes, etc.

   (b) Acquisitions costs – comprise costs of subscription to and purchase of information material and services.

2. Capital expenditure – covers costs of purchase of major equipment, land and building, and their large-scale repairs and renovations.

H. *Type of acquisitions costs*

1. Payments to technical information services – including costs of advisory and consulting services providing by consulting firms, information and referral centres on sources of information; and access to information contained in databases managed by technical information services.

2. Purchase of books – covering the purchase from editing and publishing enterprises of information resource material such as books, manuscripts, reports, pamphlets, brochures, directories, catalogues, drawings, maps, photographs, microforms, slides and other transparencies, films, sound records, tape, cassettes, video-tapes, and disques, and all other materials that are not produced on a periodical basis.

3. Purchase of periodicals – covering the purchase of information resource material other than those in (b) above, that are produced on a regular periodical basis, such as journals, bulletins, digests, reviews, and all other periodicals.

4. Payments to libraries – including those made to libraries, documentation centres and archives for services of searching, processing, analyzing, repackaging, reproduction, loan, circulation and distribution of information resource material.

5. Subscriptions to research and trade organizations covering the costs of subscription to publications and documents produced by research and trade organizations.

6. Attendance at conferences, exhibitions, meetings, workshops, etc. – covering the costs of registration, fee, transportation, and allowances for attending these gatherings, during which STID are exchanged and disseminated.

I. *Source of funds*

1. Government funds – funds provided by the central, federal, state or local government authorities, and public intermediary institutions wholly financed by them.

2. Productive enterprises funds and special funds – funds allocated by public and private productive enterprises and from the "Technical and Economic Progress Fund" in countries with a centralized economy, and other special funds.

3. Foreign funds – funds received from international organizations, foreign governments and institutions.

4. Income – income received for STID services rendered.

5. Other funds – comprising all other funds which cannot be classified in the above categories (1) to (4), such as endowments, donations, gifts, etc.

ANNEX F

EXAMPLES OF SEMINAR POGRAMME ON NATIONAL POLICY ON INFORMATION (19, 20)

I - FOR A 2-3 DAY MEETING

DAY 1

(Session 1)

- Opening remarks (by a high-ranked government official)
- General discussion on national policy on information (scope/content/nature) based on the working document.
  Identification of issues for group discussions (led by the ad hoc working group)
- Instructions to working groups

(Session 2)

- Working groups

DAY 2

(Session 3)

- Working groups

(Session 4)

- Preparation of group reports
- Group reports to the plenary

DAY 3

(Session 5)

- Consolidation of issues in plenary
- Discussion on follow up mechanism

(Session 6)

- Closure remarks (by high-ranked national officials)

II - FOR A 5 DAY (or more) MEETING

OBJECTIVES

The objectives of the Consultation Meeting on National Policy on Information in (*country name*) is to lay the groundwork for the formulation of a national policy on information statement by examining the existing policies which govern the provision of information with a view to identifying:

- the gaps and inadequacies in the policies (e.g. elements not covered, more precision in the statements, etc.);

- the faults and inadequacies of the strategies and plans adopted for implementing the policies;

- the linkages to be established or the weaknesses of the existing linkages to relevant national policies and activities in related areas (e.g. telecommunications, mass media, informatics); and

- an appropriate form and format for presenting a national policy on information for eventual adoption by the national leadership as the national policy on information in (*country name*).

The subject will be discussed in four parts. The first will review the extent to which the national information requirements are in keeping with the country's major national development goals. The second topic will be concerned with the provision of manpower and physical resources. The third topic will deal with the promotion of the provision and effective use of information. The fourth topic will explore the co-ordination of information resources and the role that appropriate international information programmes, systems and services could play in assisting (*country name*) in the development of its information potential.

For each topic of the meeting, a group will be set up with a Chairman to review the current situation in the country and to discuss and expose the major policies implied and possible plans of action.

Each working groups will be assigned to examine one topic in-depth and report to the plenary on the following four aspects:

Reference to working document

- the review of the present situation .....
- the existence of any relevant policies.....
- the proposals for policy formulation .....
- the proposals for policy implementation/operation .....

The chairman will present summaries of their work and conclusions to the plenary for further discussion, elaboration and adoption of final recommendations.

DAY 1

(Session 1)

- Opening session
- Key address
- Election of Chairman and Rapporteur

(Session 2)

- Presentation of documents
- Review and discussion of scope and objectives
- Selection of working groups and definition of their tasks

During this introductory discussion the meeting will discuss what is meant by national policy on information; the general nature and scope of this policy will be defined and the principal aspects of information dealt with will be specified; the objectives of the meeting will be clarified and agreed upon; and a strategy will be worked out for conducting the work.

In discussing the above, the meeting will bear in mind that the main goal is to set up criteria considered of primary interest for the formulation of a national policy on information which will consolidate the gains and further enhance the development of the country's national information system.

DAY 2

(Sessions 3 & 4)

The working groups will discuss the following topics on the basis of elements provides in documents.

Topic I : **Importance of information as a resource and commodity**

Chairman: .....
Resource person: .....

(Reference to document)

During the discussion the working group is expected to assess the importance given in the country to **information as a resource and commodity** in national socio-economic development strategies, keeping in view the national development goals, the existing relevant national policies (e.g. science and technology; statistics ...), the current generation, mobilization, marketing and circulation of STI in the country and the present state of the information industry in (*country name*). This group should identify the information consumers (e.g. managers, planners) in problem-solving in the development process, ascertain the areas (e.g. current research, technical specification, statistical data ...) in which information is needed and the extent to which general information services (e.g. national libraries, computing centres ...) provide back-up services to more specialized services; from there the group should agree upon the most suitable choice of information policy aspects which shall guide the information input (generation, collection, distribution) into the problem-solving process in national planning, decision making and investment.

Topic II: **Provision of resources needed to satisfy the information requirements**

Chairman: .....
Resource person: .....

(Reference to document)

Under this topic the group may wish to examine the **resources needed** (manpower, physical facilities, funds) which could help or impede the flow of information to the problem solvers in development.

The group may wish to consider here the range of skills required (e.g. authors, publishers, computer specialists, information managers, librarians ...) in the process of the generation and communication of information. The specific problems associated with the provision of manpower are those of attracting suitable persons, providing opportunities for vocational education and ensuring that adequate remuneration is offered, together with proper status and career prospects.

It may also wish to review the provision of adequate physical facilities and modern information technologies and the general policy questions that the introduction of such equipment raises. Finally it could consider the question of ensuring reliable supplies of both investment and recurrent finance.

Topic III: **Promotion of the provision and use of information**

Chairman: .....
Resource person: .....

(Reference to document)

Under this topic the group may wish, on the one hand, to answer such questions as to what extent the access to information is organized? What institutions are involved and is there any co-ordination? On the other hand, the group should give its attention to the problem of increasing users' awareness of the importance of information for their various activities and their ability to make use of such information. Provision, marketing and use of information call for a specific set

of policy guidelines at the national level, which the group may wish to identify.

Topic IV: **Organization and exchange of national information resources**

Chairman: .....
Resource person: .....

(Reference to document)

The aim of this discussion could be the formulation of an information policy at the national level concerned with the establishing of conditions for effective **information management** by providing a sound organizational framework within which the various institutions can operate and by providing adequate resources to enable that framework to function effectively; the co-ordination of existing institutions is likely to be the most practical solution, involving the establishment of some kind of co-ordinating mechanisms which may require legislation; legislation will also be required to reinforce the spirit of international co-operation.

DAY 3

(Session 5)

- Working groups (continued)

(Session 6)

Presentation to the Plenary of the results achieved by the working groups, according to the outline above and discussion

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DAY 4

(Session 7)

Continued

(Session 8)

National Information Policy Goal

Chairman: .....
Resource person: .....

(Reference to document)

The main objective of this discussion is to highlight all the elements that need to be included in a national policy on information and to provide a preliminary plan of action for its implementation.

DAY 5 (Plenary)

(Session 9)

Consolidation of the recommendations

(Session 10)

- Adoption of the report and recommendations
- Closure of the meeting

ANNEX G

EXAMPLES OF EXTERNAL FUNDING SOURCES

1) **Bilateral aid agencies**

- Banque internationale d'information sur les Etats francophones (BIEF), Canada
- Danish Agency on International Development Cooperation (DANIDA), Denmark
- Délégation à l'information scientifique et technique (DIST), France
- Direction des bibliothèques, des musées et de l'information scientifique et technique (DBMIST), France
- German Foundation for International Development (Deutsche Stiftung für Internationale Entwicklung - DSE), Federal Republic of Germany
- Overseas Development Agency (ODA), United Kingdom
- Norwegian Agency for International Development (NORAD), Norway
- Swedish International Development Agency (SIDA), Sweden
- United States Agency for International Development (USAID), USA

2) **International non-governmental and semi-governmental organizations**

- The International Federation for Information and Documentation (FID)
- The International Federation of Library Associations and Institutions (IFLA)
- The International Council on Archives (ICA)
- The World Federation of Engineering Organizations (WFEO)
- The International Federation for Information Processing (IFIP)
- The International Council of Scientific Unions (ICSU)

3) **Intergovernmental organizations**

- The African Development Bank (ADB)
- The African Development Fund (ADF)
- The Inter-American Development Bank (IDB)
- The Islamic Development Bank
- The Arab Bank for Economic Development in Africa (ABEDA)
- The Arab Fund for Economic and Social Development (AFESD)
- The Asian Bank for Development
- The Caribbean Development Bank

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